

The background of the image features a complex, abstract geometric pattern composed of numerous thin, light-colored lines forming a series of interconnected spheres or polyhedra. This creates a sense of depth and motion, resembling a molecular model or a microscopic view of a crystal lattice.

Neha Kumari

Architectural Portfolio

2016 - 2021



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You Tube : A R C H Studio
Content Creater

<https://www.youtube.com/channel/UC-iEy6COjB-UV0wdh6qIovhw/featured>

[Instagram : https://www.instagram.com/archstudio.in/](https://www.instagram.com/archstudio.in/)

[Twitter : https://twitter.com/ArchstudioI](https://twitter.com/ArchstudioI)

Nationality: Indian

language : English , Hindi

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CONTENT

Education :

2004 - 2014	Qualification Awarded Institution	Primary Education Mt. Carmel school Patna , Bihar
2014 - 2016	Qualification Awarded Institution	Higher Education Mt. Carmel school Patna , Bihar
2019	Qualification Awarded Institution	Diploma Autodesk Software Lelogix , Alpha commercial Greater noida , Up
2016 - 2021	Qualification Awarded Institution	B.Arch Sharda University Greater noida , Up

Technical skills :

Autodesk AutoCad	• • • • •
Autodesk Revit	• • • • •
Autodesk 3dsMax	• • • • •
Sketch up	• • • • •
Adobe Photoshop	• • • • •
Adobe Illustraor	• • • • •
Adobe Indesign	• • • • •
Adobe Premier Pro	• • • • •
Rhinoceros / Grasshopper	• • • • •
Lumion	• • • • •

Experiace :

Academic	Internship	Self Project
These Project done under the supervision of Collage project guide and teachers .	<ul style="list-style-type: none"> • 3 Month Internship Under SP and Associates , Ar.Shayam Prasad , Patna Bihar 	Delivered project Consistently during academic Time
<ul style="list-style-type: none"> • Chanki-Gadh Site museum • Riverfront Development • Tourism Centre • Spritual centre • Residential • Tactical urbanism • Parametric design - tensigritiy Pavillion • Working Drawing 	<ul style="list-style-type: none"> • Designed Duplex Bunglow (30 x 40) m - start in 2021 • Designed Duplex Bunglow (20 x 30) m - start in 2021 • Designed Marriage hall , Hajipur ,Bihar - On soil level • Working Drawing Nursing home • Project done under the supervision of Ar. Shayam Prasad • 2 month Internship under GNIDA - Greater Noida Industrial development Authority 	<ul style="list-style-type: none"> • Farm House - Chanki gadh , Bihar - On First level • Office and Shop - parihar , Bihar - On soil level • Floor Extention , Patna Jakanpura - Start in 2022 Organised parametric Workshop For 1st , 2nd and 3rd year B.Arch Student of sharda university

Competition

- Awarded 2nd place in Rejuvwnation of Alpha Commercial Belt , Greater noida
- Certificate for Portal design for new capital city Amravati
- Certificate for Design Whack star student award for cultural centre

Workshop Attended

- Timber Pavillion : Site : Sharda University , Greater noida ,Up
- Concrete Furniture : Site : Sharda University , Greater noida ,Up
- Digital Fabrication : Rhino and Grasshopper

Seminar Attended

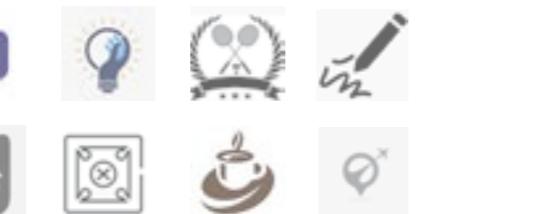
- Talk On Power of Design : By Prof , Martha Thorne , Dean of IE Sap
- Futuristic Architecture Trends : International Conference

Guest :
: Christopher Charles Beninger
: Rewati kamath

Interest

- 3D modelling
- Sketching
- Physical models
- Presentation Drawing
- Designing

Hobbies



01. Academic Work

B.Arch Studio Work

01.1 : Parametric Design

1.1.1 : Pvillion Design

1.1.2 : Lamp Design

01.2 : Tactical urbanism

Site : Jagdeopath , Patna , Bihar

01.3 : Chanki Gadh site museum

Site : Chanki gadh , Bihar

02. Internship Work

Sp & Associates , Maharaja Kameshwar complex Patna

02.1 : Bunglow Design

Site : Purnia , Bihar

Area : 15 X 27 m

02.3 : Working Drawing

Site :

GNIDA - Greater Noida Industial Development Authority

02.3 : Rejuvenation of Alpha Commercial belt , Greater Noida , Up

Site : Greater Noida Up

03. Workshop

Summer term hand on workshop

03.1 : Concrete Furniture

Site : Sharda University , Greater Noida , Up

03.2 : Timber Laminated pavillion

Site : Sharda University , Greater Noida , Up

03.3 : Petal Concrete Pavillion

04. Self - Intervention

Delivered project Consistently during academic Time

04.1 : Farm House

Site : Chanki gadh , Bihar

04.2 : Floor Extension Project

Site : Jakanpura , Patna

04.3 : Organised Parametric workshop

Site : Sharda University

04.3 : Shelf Design

PARAMETRIC DESIFN



PARAMETRISM

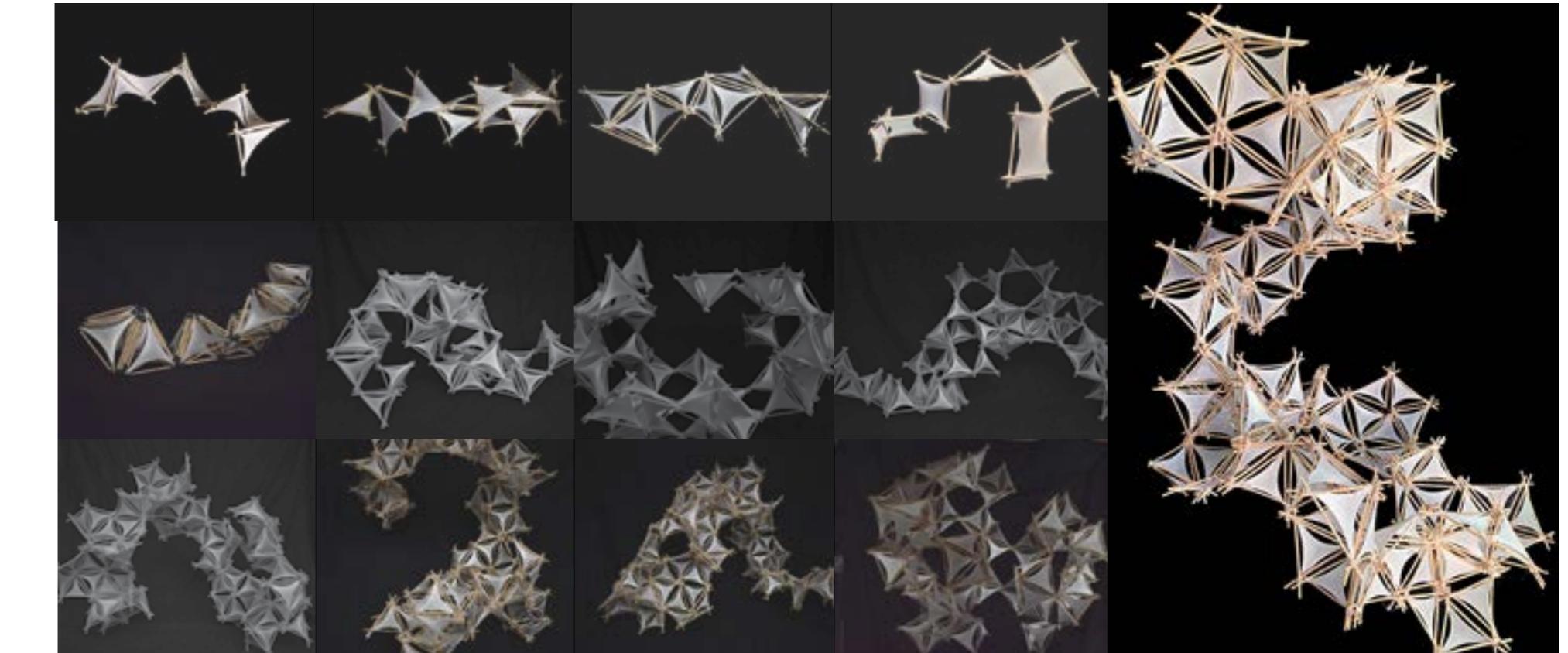
The project explore the effect of different geometries resulting from a system of arrangement of struts (bamboo sticks) and four way stretchable fabric or elastic membrane (lycra). With aim to achieve doubly curved surface. First , attempt to utilize a single component to create a varied 3D , doubly curved surface assembly . The component is composed of a single geometric form with a system of notches. That when assembled to create 3D network of component to keep maximum cloth in tension with minimum material , such resulting form achieves a height. To develop doubly curved surface , we choose bamboo and lycra as a material.we investigated its principle characteristic , limitation and possible joinery detail and its solution. The process was taken thought digital and physical exploration combined . For instance , physical inductive prototypes were required to joints behaviour comprehension and its reproduction on digital domain . On the other hand computational tools were necessary to generate accurate globe organisation and to prove that the system works in a 1 : 1 scale.

EXPERIMENTS 1 : TO ACHEIVE DOUBLY CURVED SURFACE WITH-OUT TIEING STRUTS

TRIANGULATION

MATERIAL : Bamboo struts & lycra , to fixed structure third matrial pico thread used to tie.

Lightweight , tensigritiy membrane



EXPERIMENTS 2 : TO ACHEIVE DOUBLY CURVED SURFACE WITHOUT TIEING STRUTS

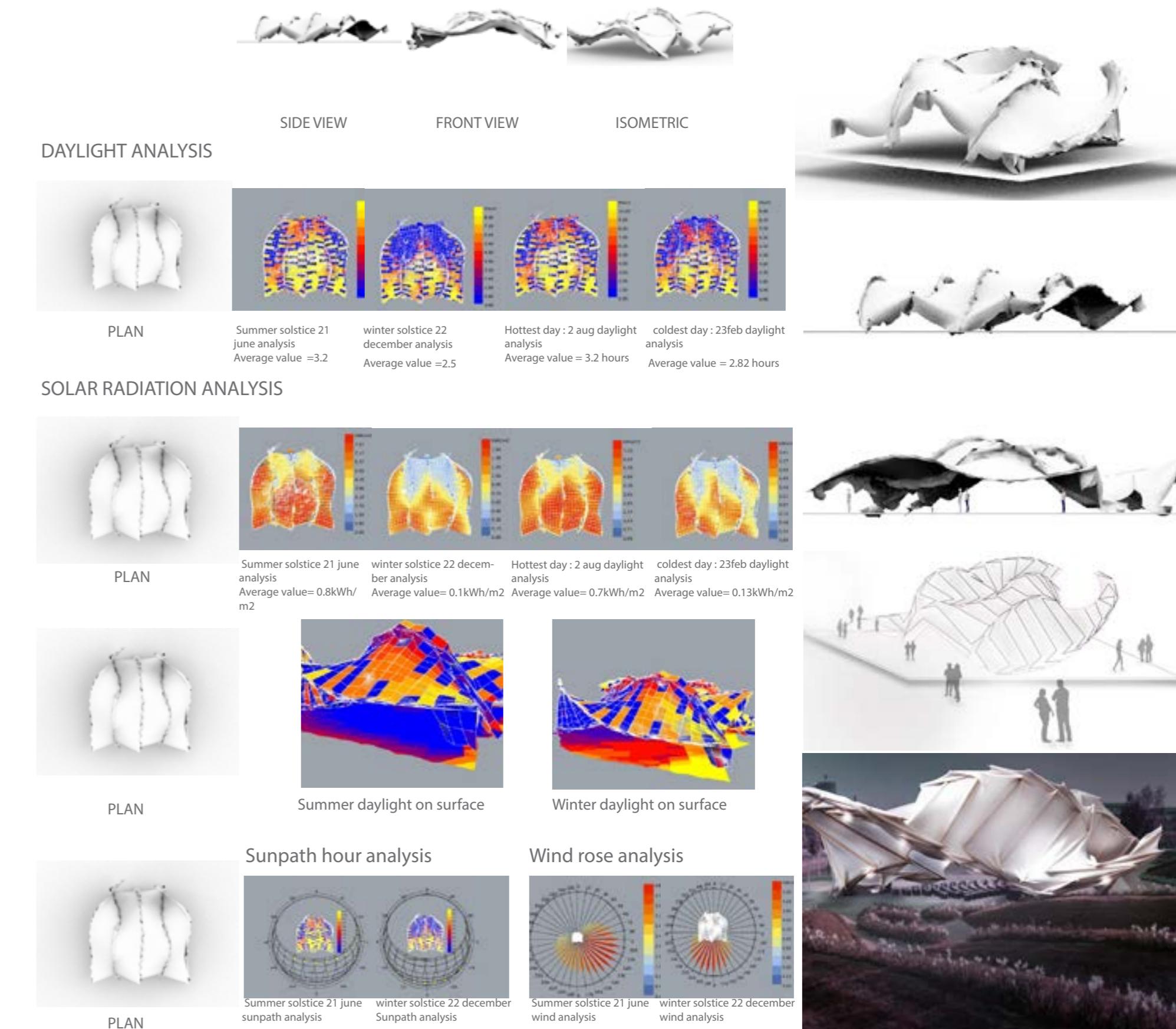
TENSe - FRAMING

MATERIAL : Bamboo struts & lycra , to fixed structure without third material..

Lightweight , tensigry membrane

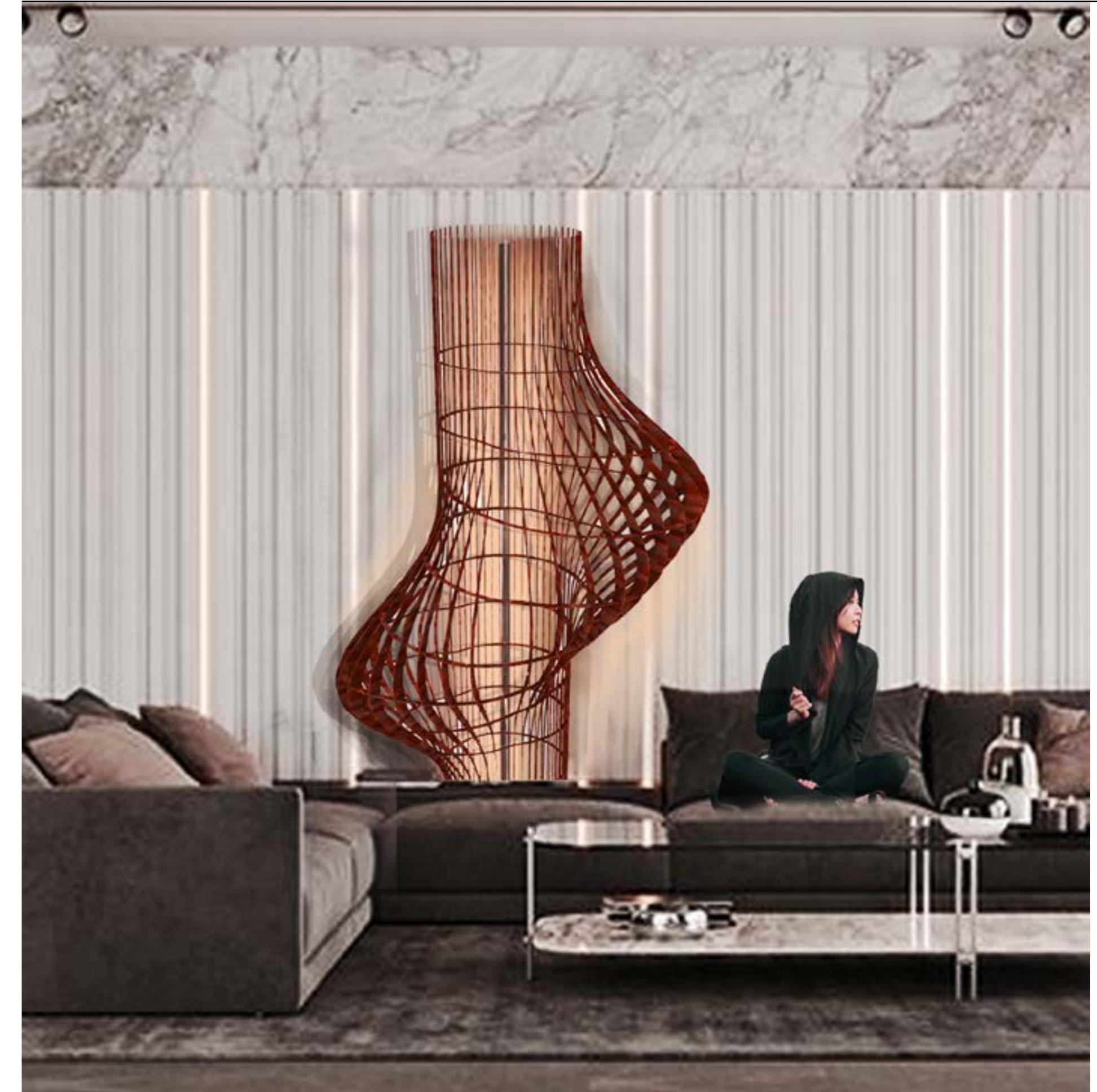
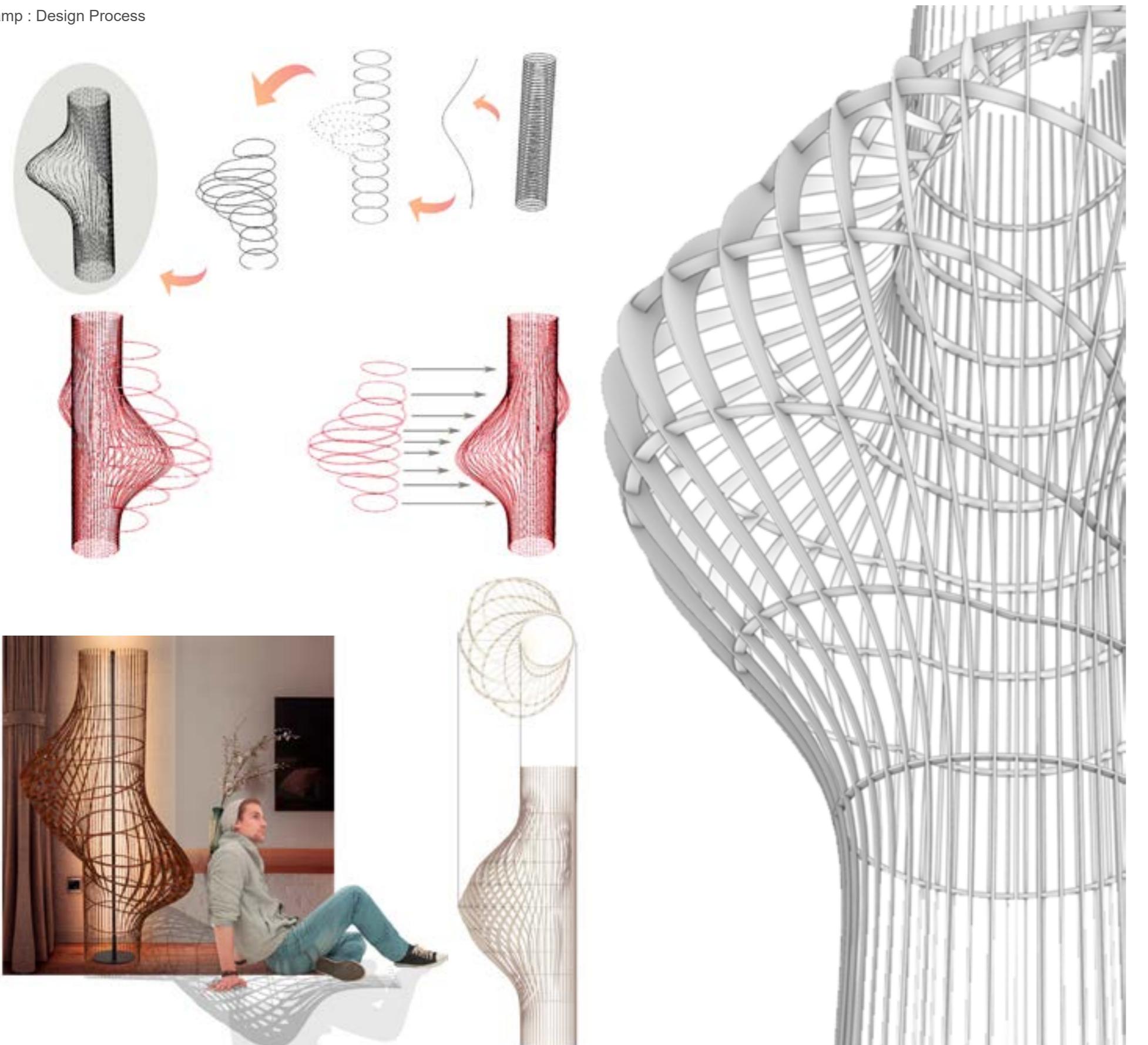


FINAL FORM ANALYSIS



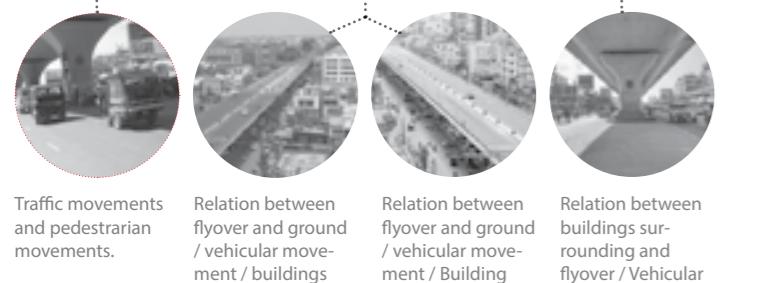
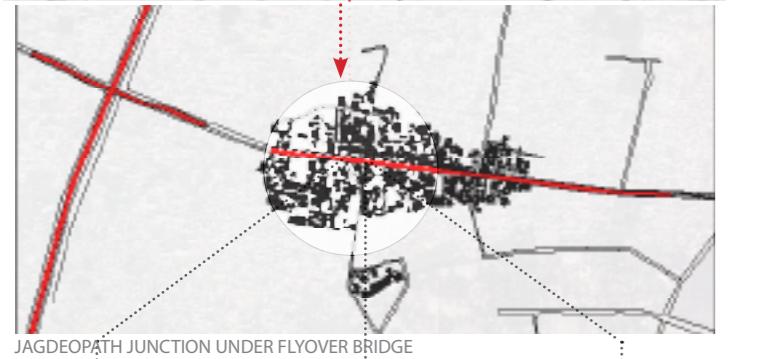
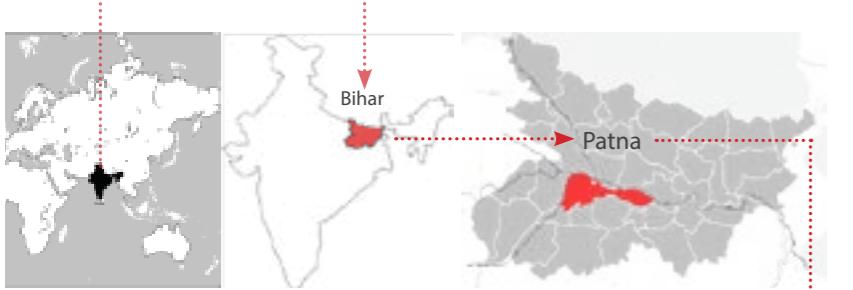
Parametric Digital : Lamp Designed

Lamp : Design Process

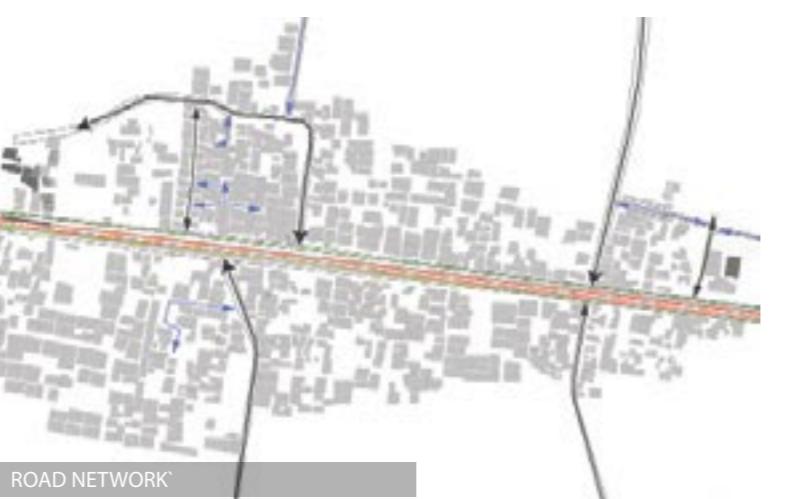


TACTICAL URBANISM

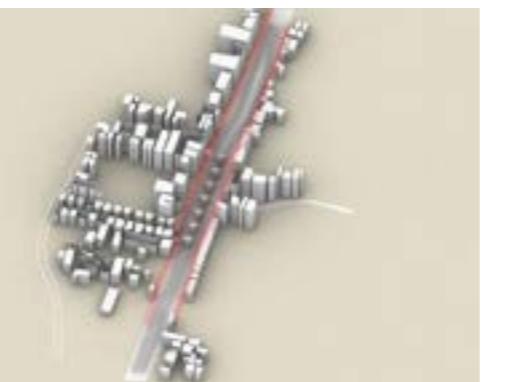
Site selection / Site location



Site mapping

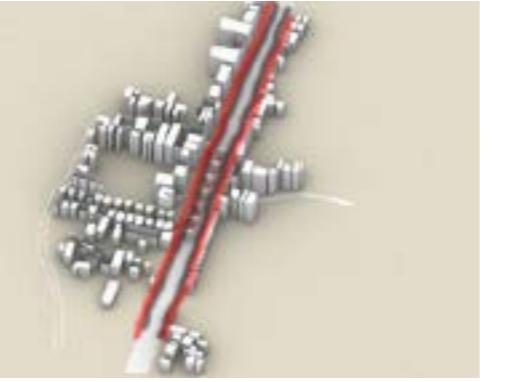


Activity analysis



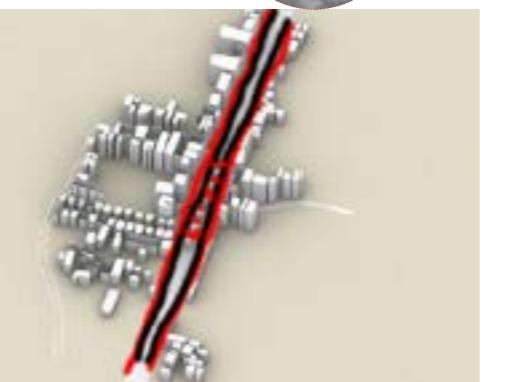
Purpose MORNING :

- Morning tea
- Breakfast
- vegetable
- Dairy
- Walking
- Schools bus
- Offices
- Private vehicles



Purpose AFTERNOON :

- Vegetable
- school bus
- Private vehicles
- Auto / Rikshaw
- Govt. bus



Purpose EVENING :

- Vegetable
- Dairy
- Private vehicles
- Vegetable market
- Auto /Rikshaw
- Office

Issue identified

- Food stall under flyover
- Adevertisement poster on pillar
- no-signage provided
- Vacant space are used as Garbage dumping .
- No sitting area located for emergency Traveller.
- No meeting or gathering place
- No specified parking place .
- Improper landscaping.



No signage / no proper landscape



Poster on pillar creating bad impression



vacant space are used as garbage dumping

Design intervention

- Safe space for Walking , cycling , driving , Pedestrianian.
- Horizontal and vertical space for vendors
- vertical Gardening on column
- Outdoor seating
- Provide parking.
- Provided signages.
- Graffiti on column

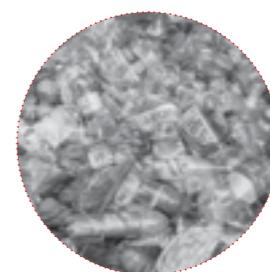
Theme for design

WASTE MATERIALS

Material choice

Focusing more on Waste material :

- PLASTIC WASTE (Plastic bottle , polythene , milk plastic etc)
- PAPER WASTE (News paper etc)
- CARDBOARD



Plastic bottle



Unused cloths

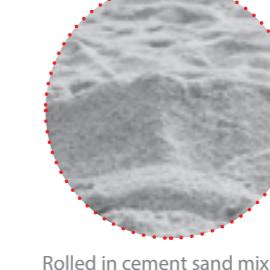
- Bottle pavillion : 594 bottle used for making one pavillion.
- Table : 130 bottle used for making table.
- Chair : 145 bottle used for making chair.
- Unused cloth has been used to make vertical garden on column
- Streets Blocks has been remove and relocate for more landscape



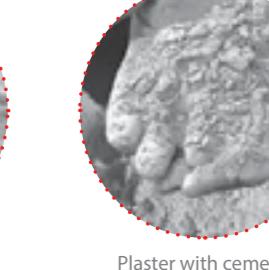
Unused cloth



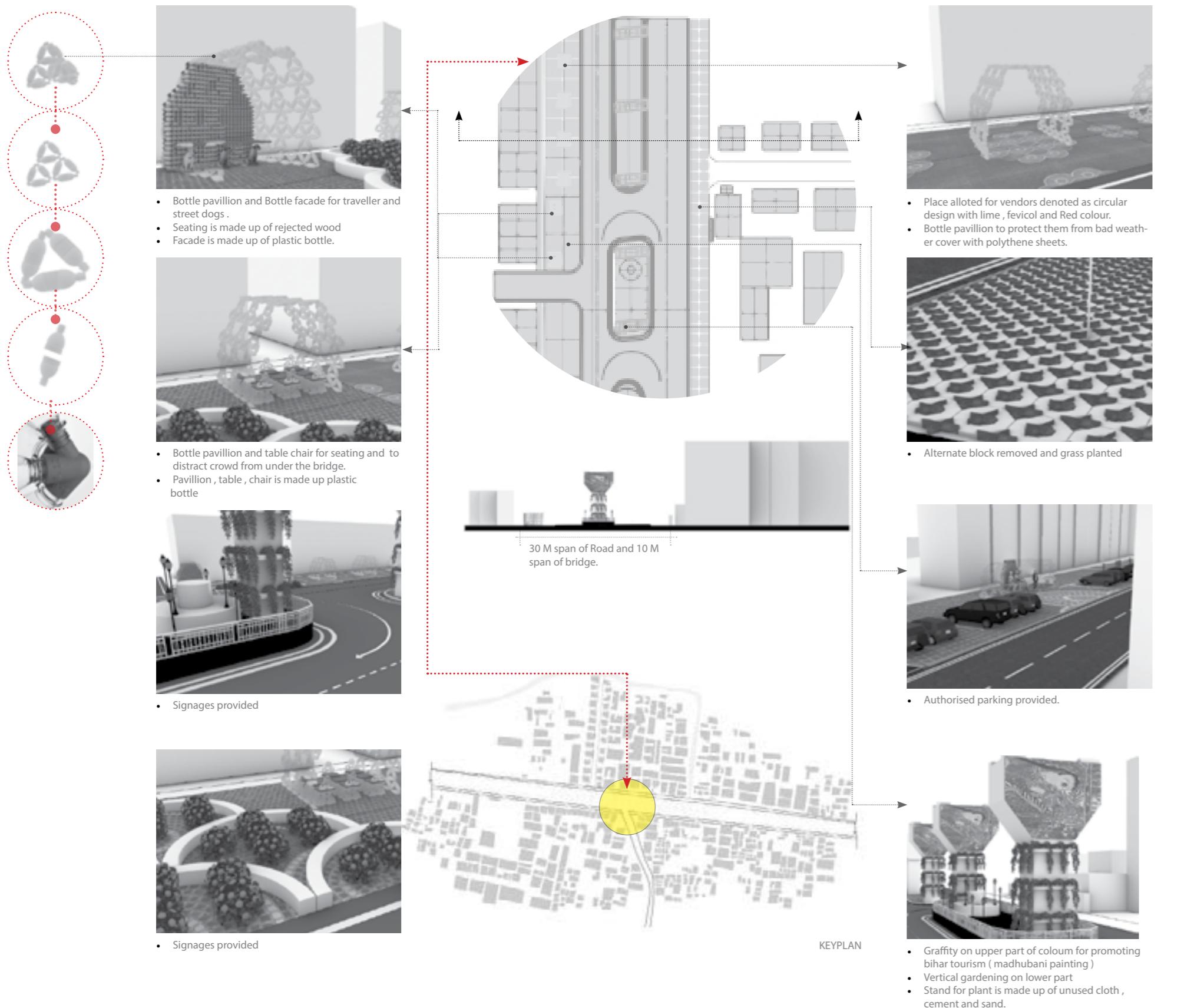
Rolled in cement sand mix



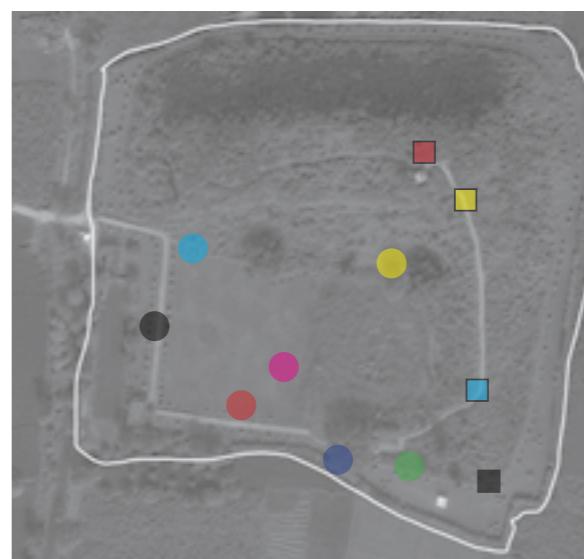
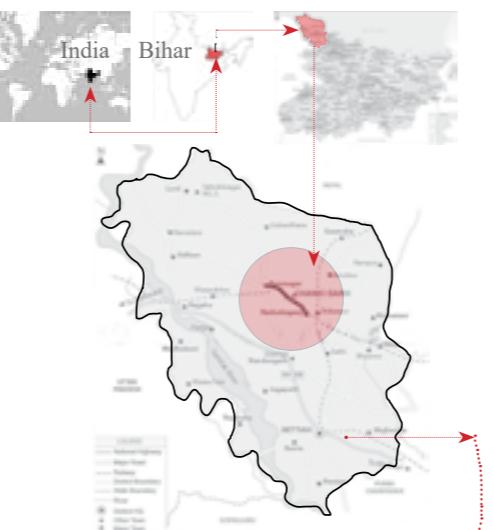
Rolled in cement sand mix



Plaster with cement



CHANKI - GADH SITE MUSEUM

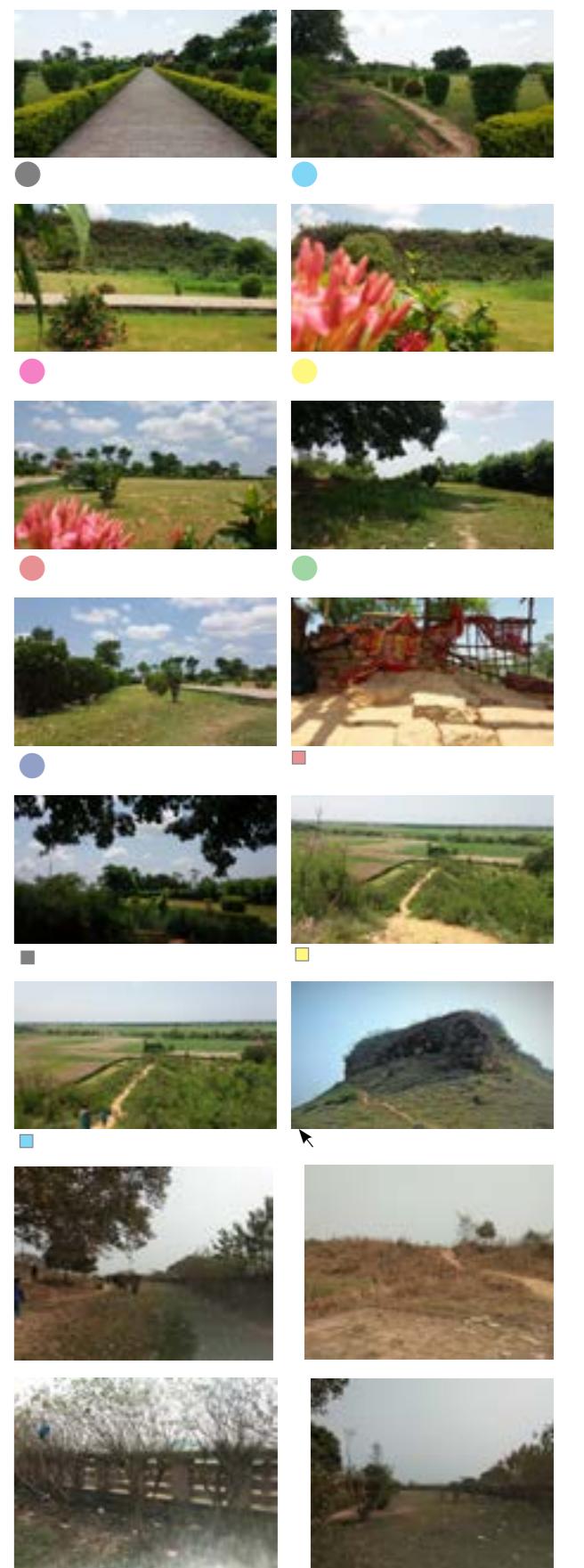


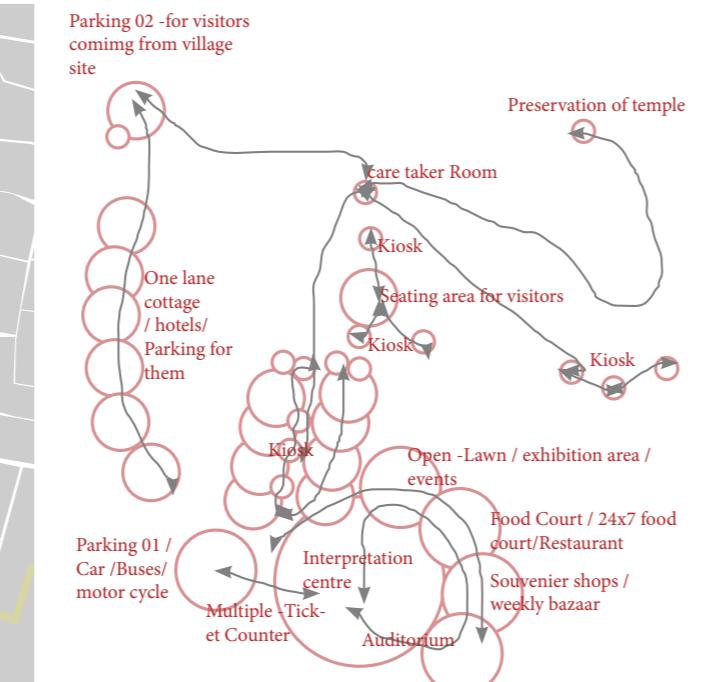
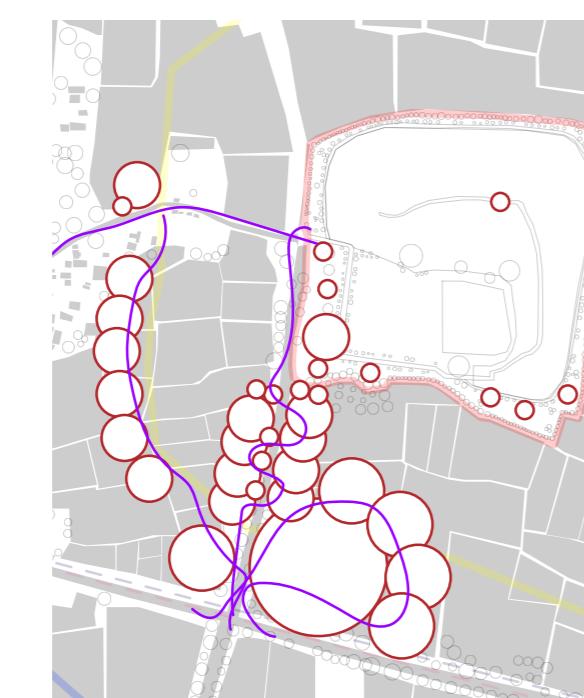
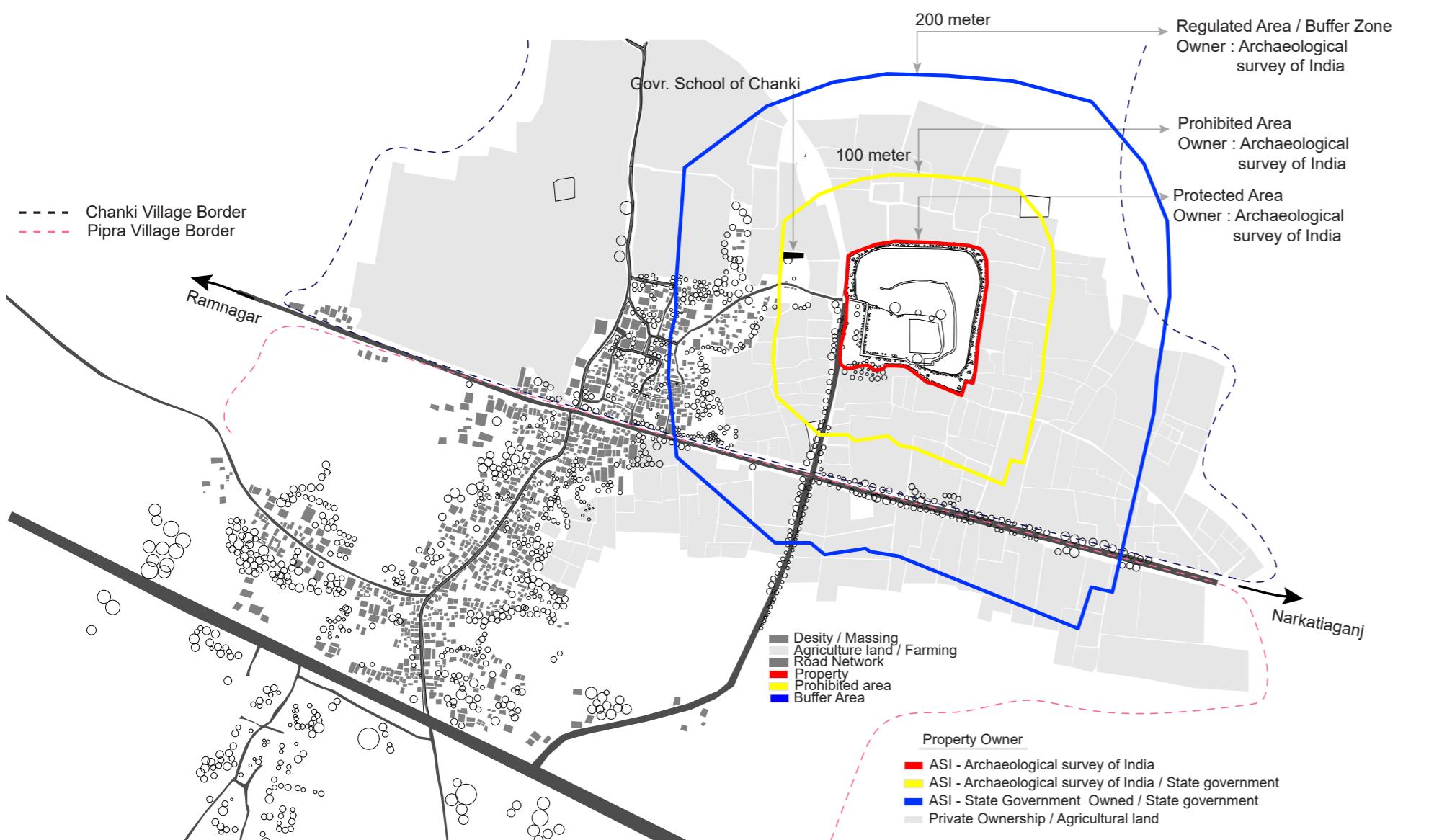
Gadh (protected area)

Site Details

Site area is divided into the followings :

- Total Plot Area : 40277 sq m
- Fort (Gadh Local Language) area :- 20869 sq m
- Pond area :- 2192 sq m
- Built up area :- 200 sq m
- Open area :- 17016 sq m

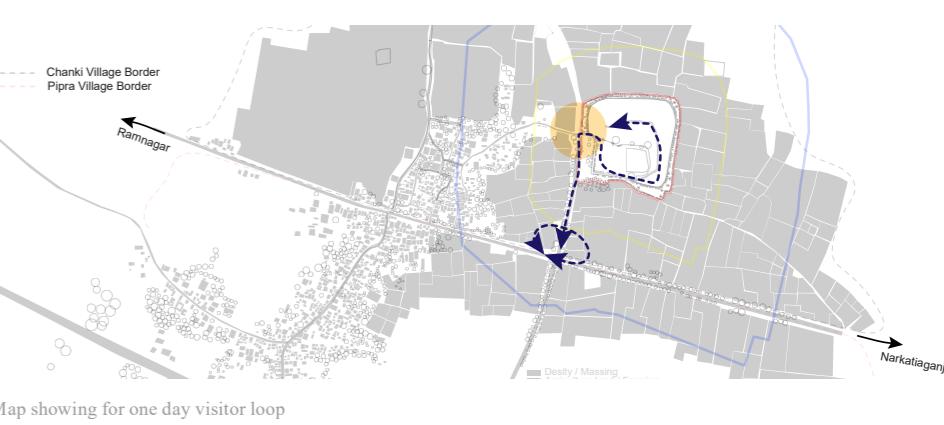




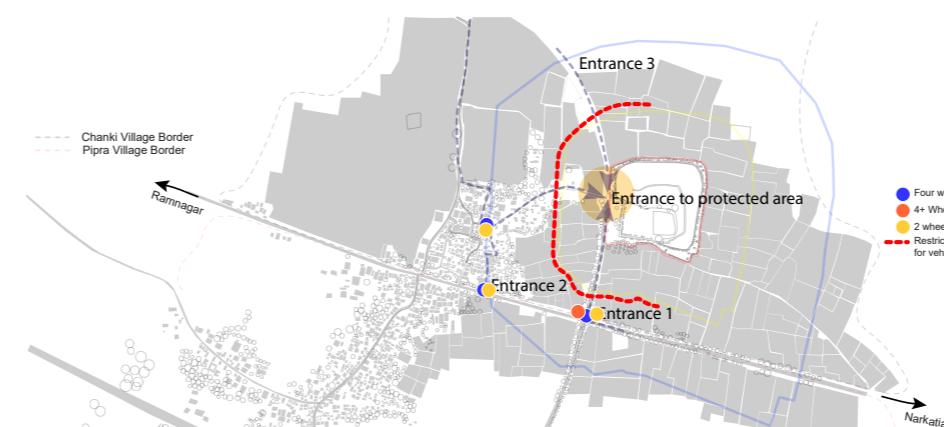
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Map showing Entrance loop to protected area



Map showing for one day visitor loop



Modelo: 1995-1996 - Versão: 1.0 - Data: 1995-08-01 - Sistemas: 1 - Fator:



Map showing Pedestrian Movement



Map showing Analysed footfall area

Total area

Ground Floor

Ground Floor

Parking area = 4900 Sq.m

Ticket counter and Lobbies area = 150 Sq.m

Ticket counter and Locker area = 150

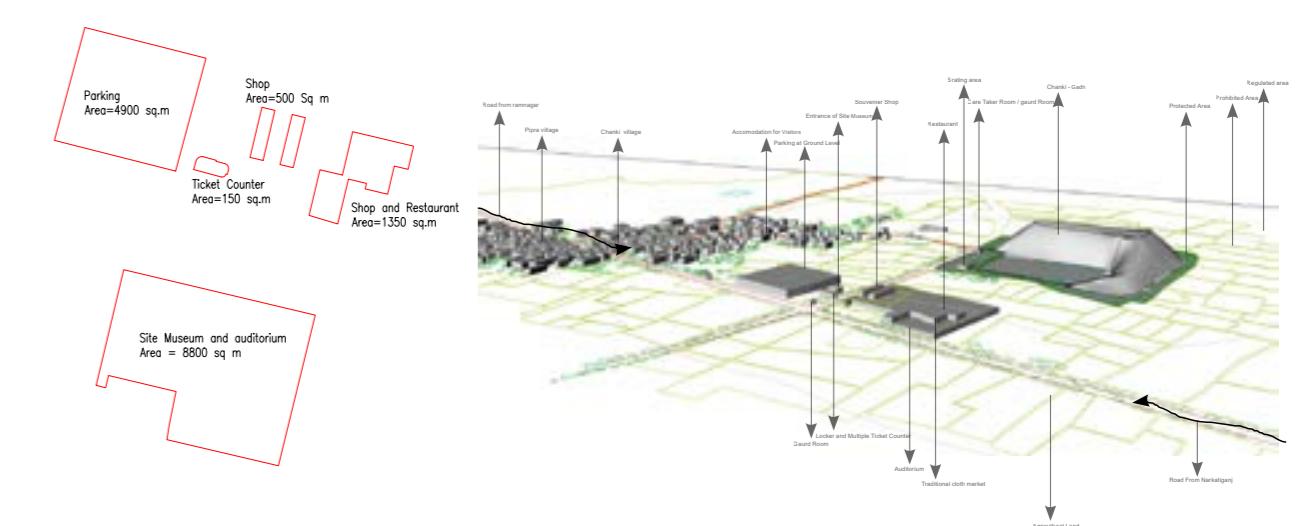
Shop and Restaurant = 1350 Sq.m
6000 sq.m

Basement

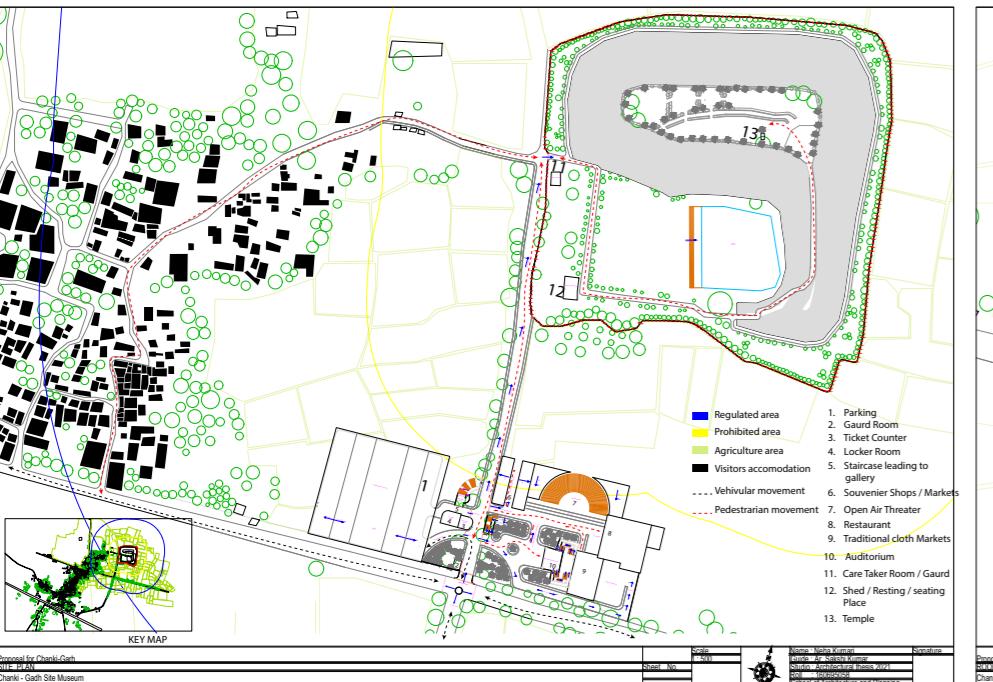
Basement
Site Museum and Auditorium = 8800 sq. m

Site Museum and Auditorium – 8800 sq. m

$$\text{Total Area Cover} = 8800 + 6900 = 15700 \text{ sq .m}$$



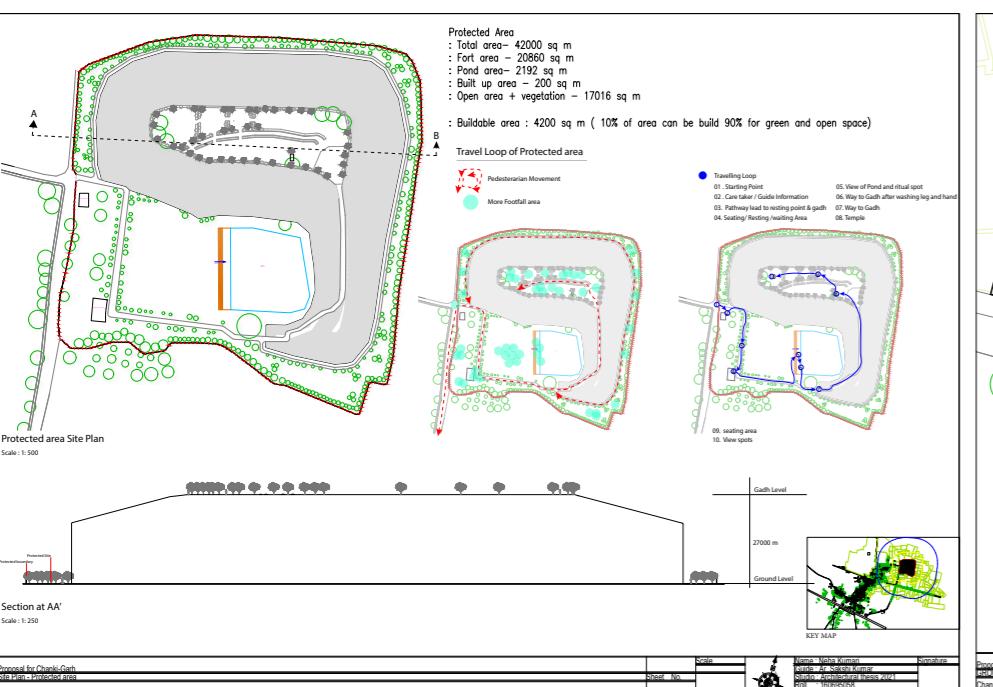
$$\text{Total Area Cover} = 8800 + 6900 = 15700 \text{ sq. m}$$



SITE PLAN



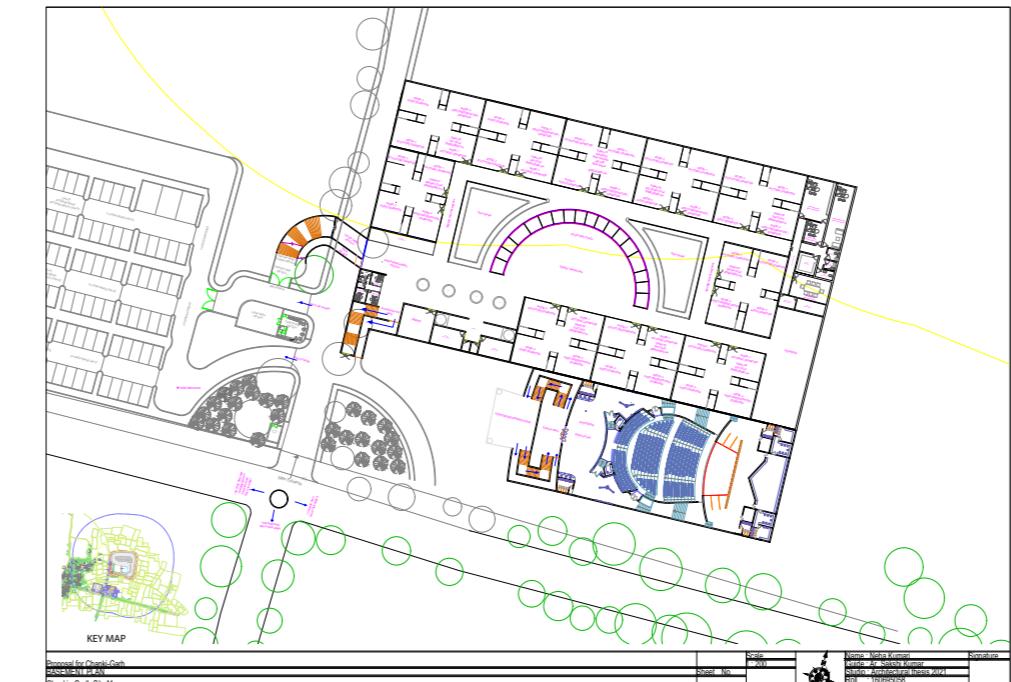
ROOF PLAN



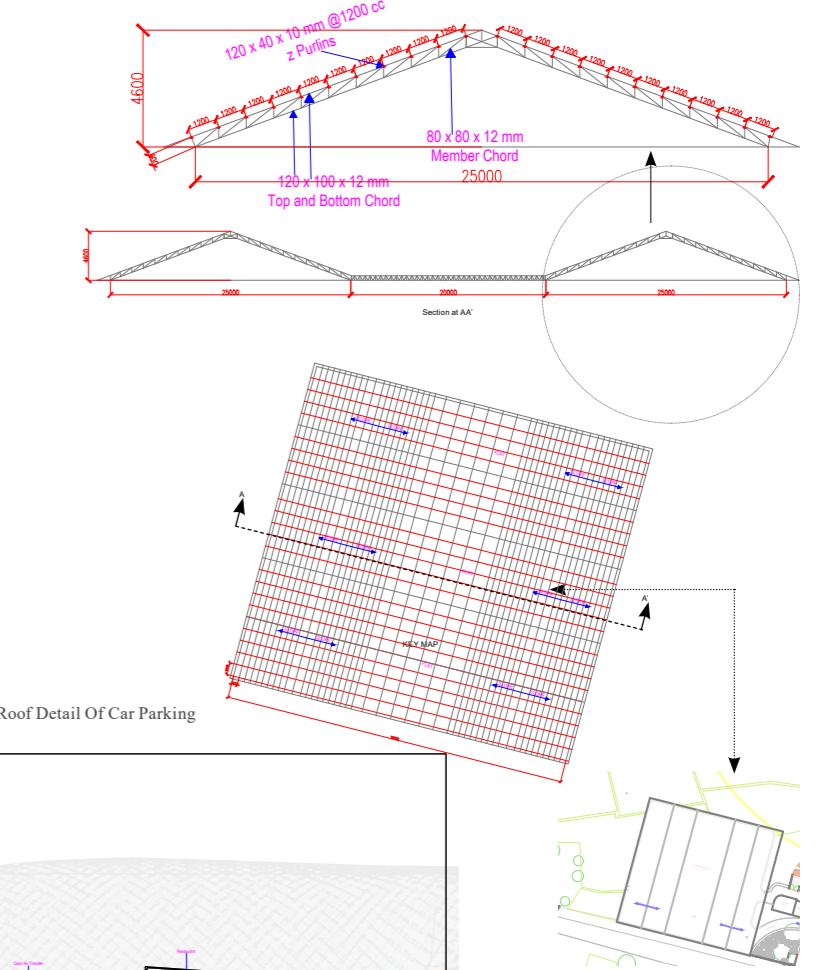
PROTECTED AREA SITE PLAN



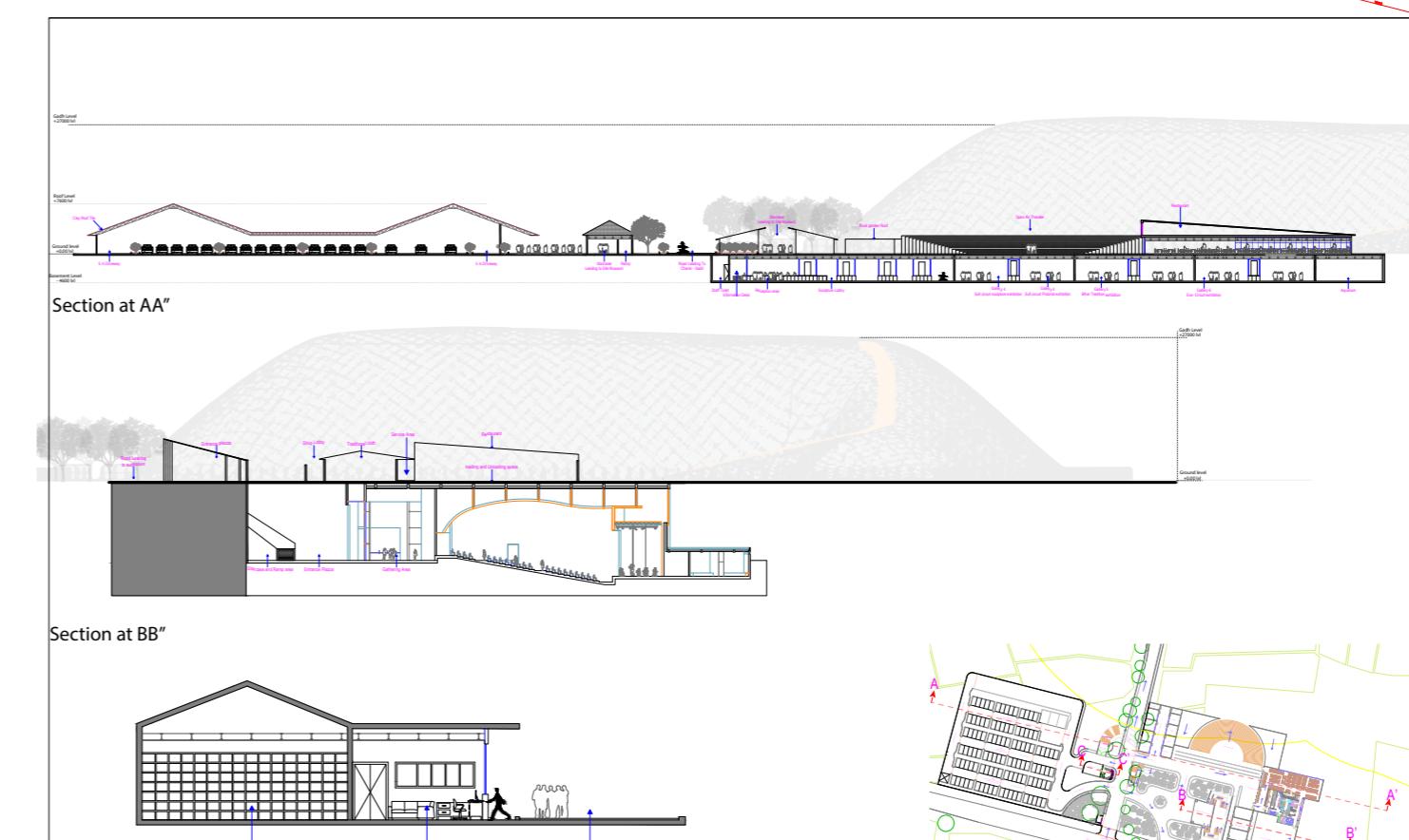
GROUND FLOOR PLAN



BASEMENT PLAN



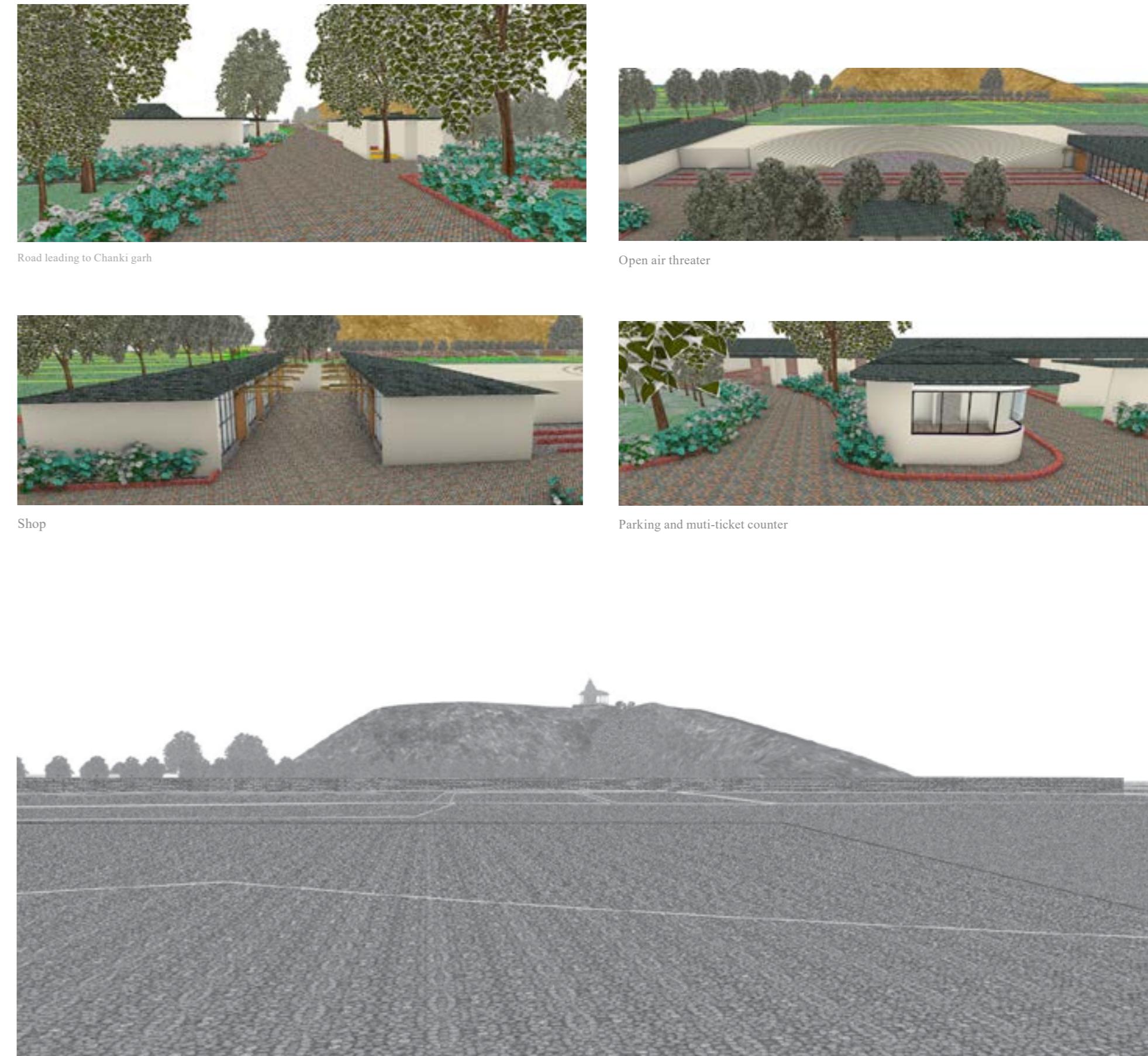
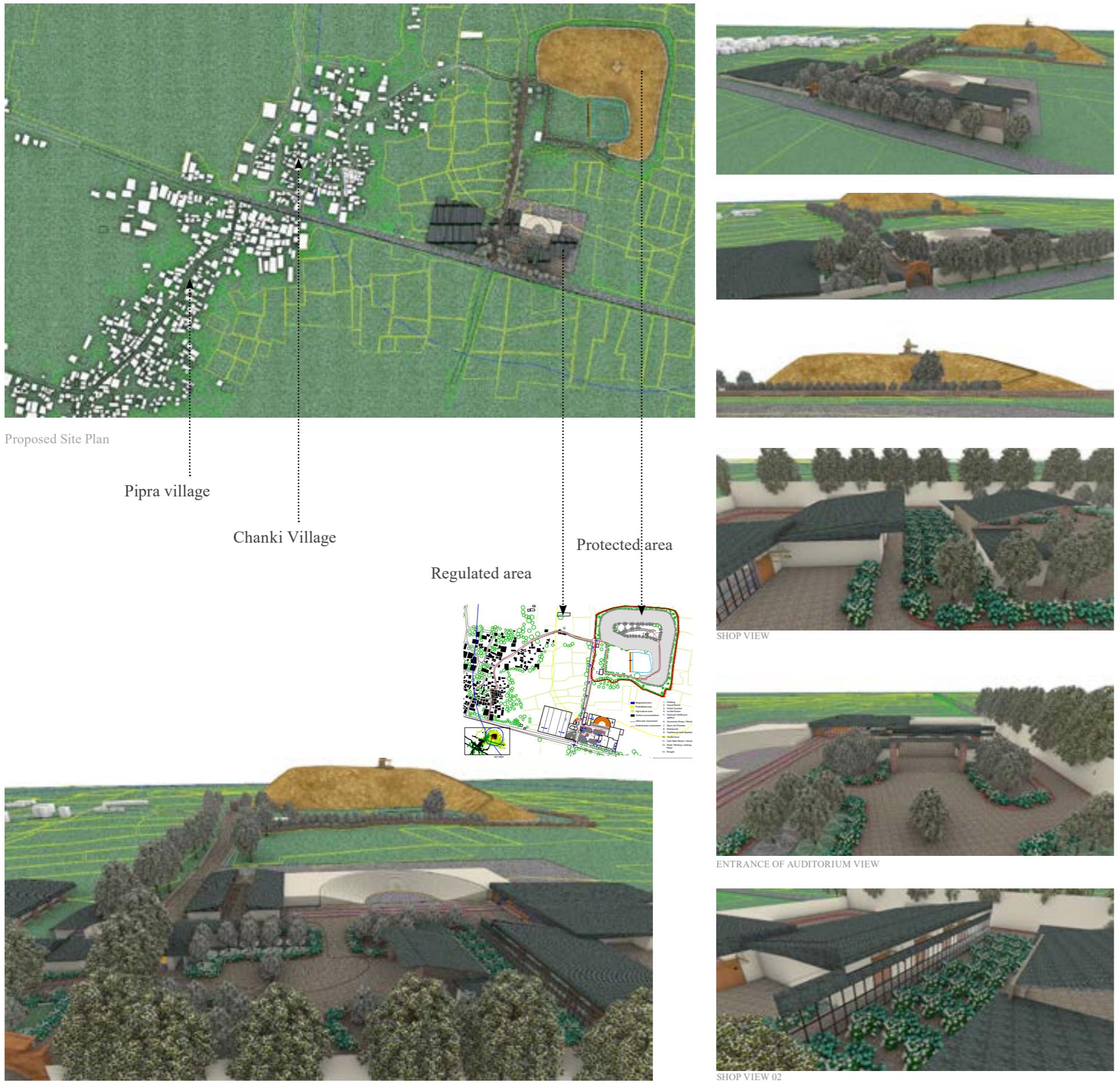
Roof Detail Of Car Parking



Section at CC''



DETAILED SECTION



02 : Internship Work : SP \$ Associates

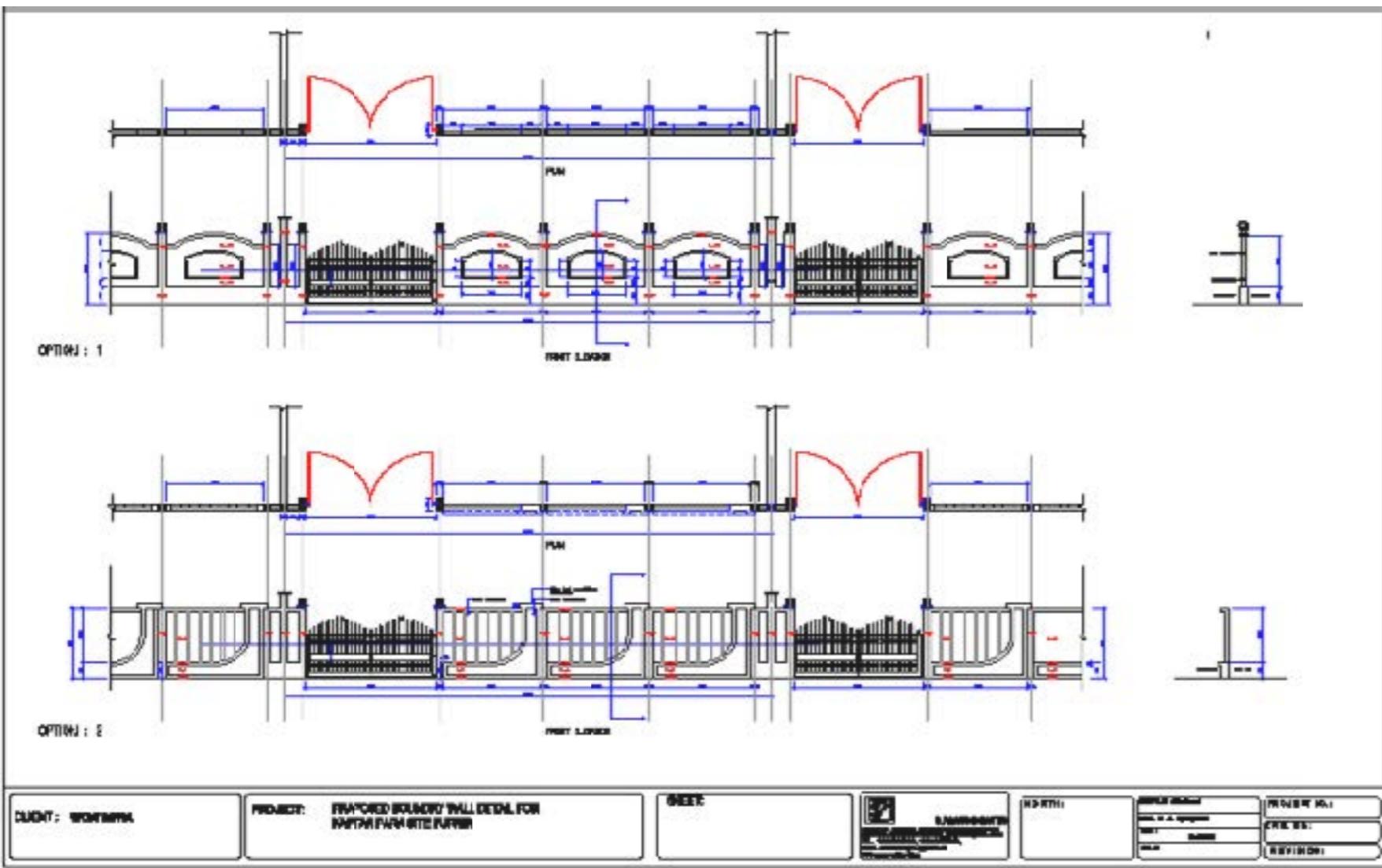
Bungalow

- : Total plot / site area in sq m = 405 sq.m 200 sq m
- : Role of trainee student = To design , duplex bungalow containing five rooms , launge, stairs leading to first floor and terrace , kitchen , pooja room
- : Stage of the project = Design
- = Purnia , Bihar

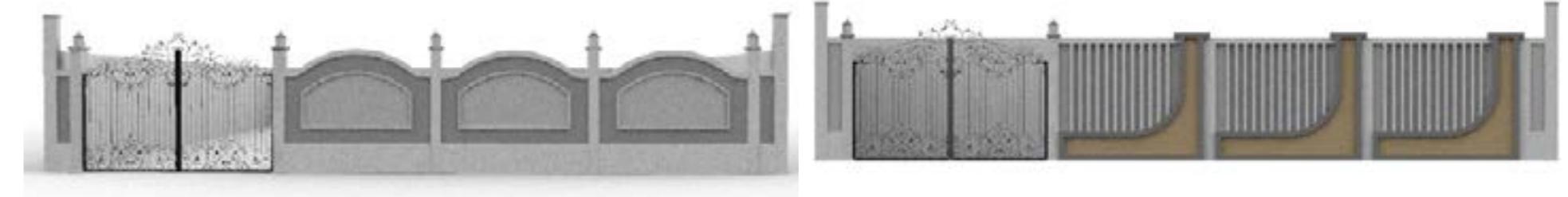
Whole project is being proposed at the Purnia , Bihar . The Site have benefit of two side river facing Which is increasing value of the site and project. At the bank of the river ghat is being proposed for taking advantage of river and celebrating funtion like chhat puja , fest and etc. And the facing river ,commercial area is like restaurant , grand apartment , swimming pool , children play area , more recreation area is being proposed.

Internal area of site is for residential purpose , where whole site is divided into three plot type for bungalow.

Designed Boundary wall for This Site



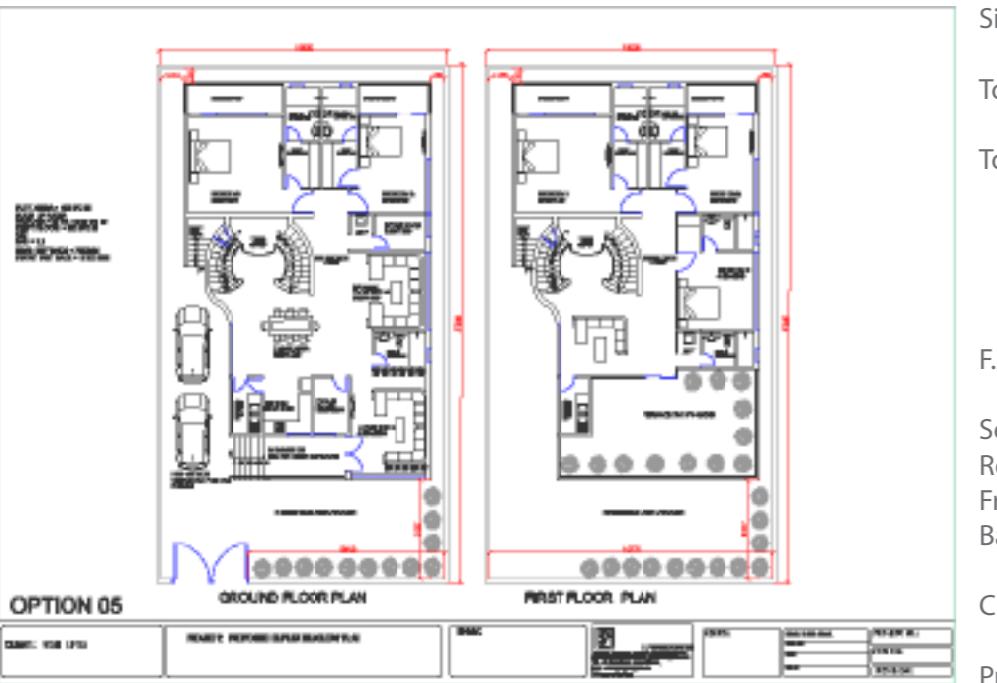
Site



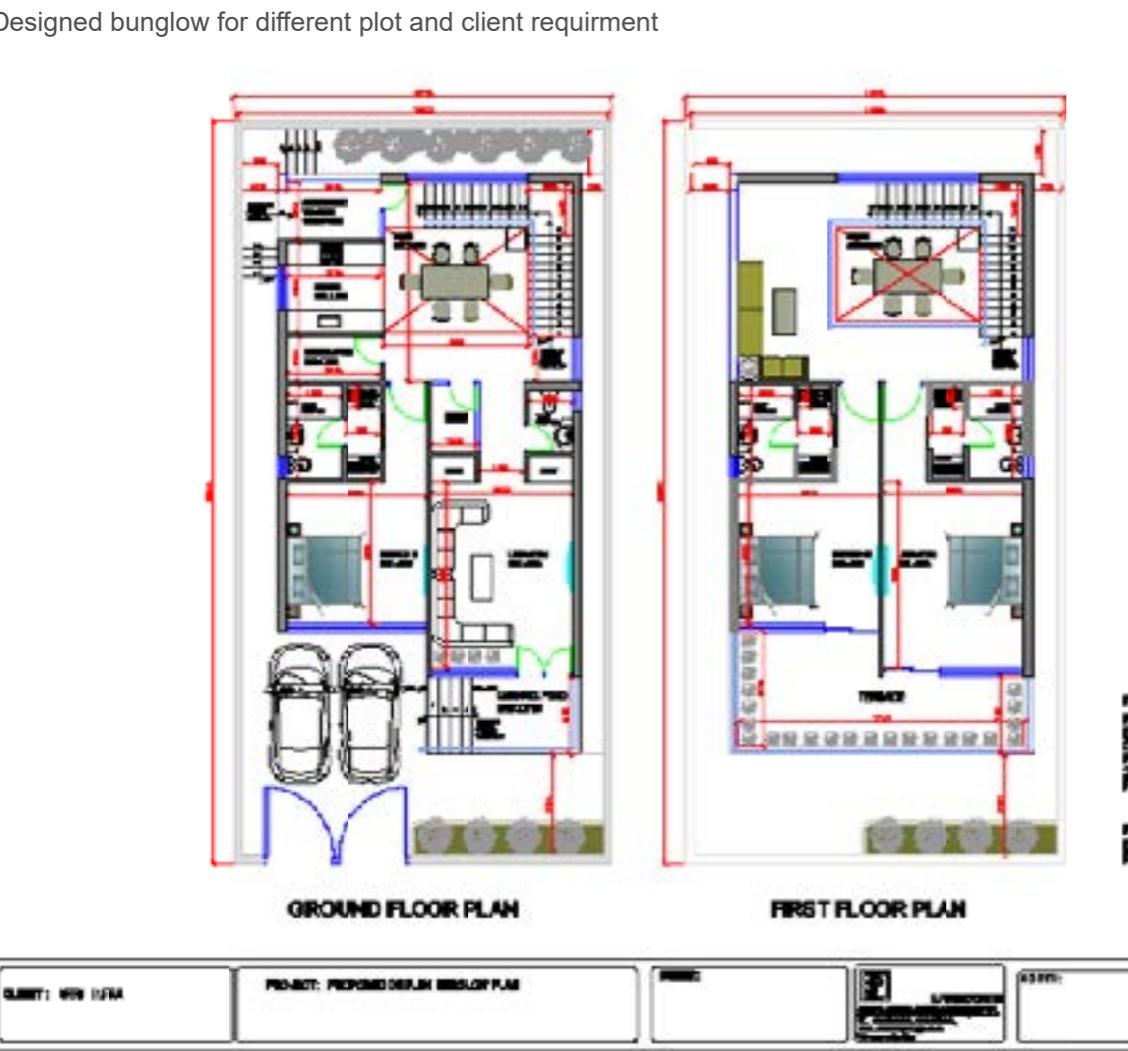
Designed Boundary wall for This Site

Designed bungalow for different plot and client requirement



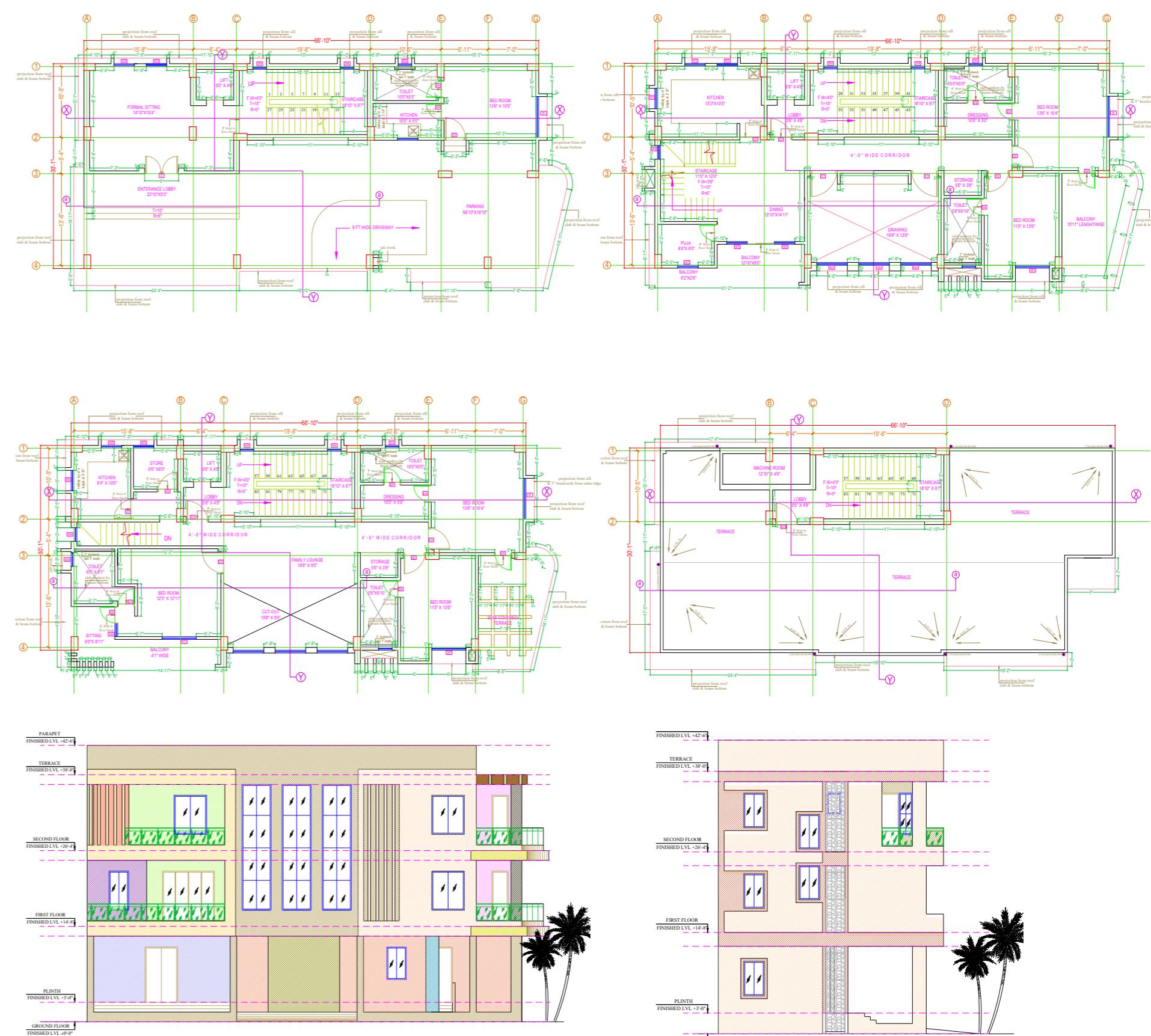


Site	: Purnia , Bihar
Total site area	: 405 Sq.m
Total build up area	:
Ground floor area	: 240 Sq.m
First floor area	: 160 sq.m
F.A.R	: 1
Setback	:
Rear setback	: 750 mm
Front setback	: 4900mm
Back setback	: 750mm
Client	: Wow infra
Project	: Duplex bungalow plan
Project budget	: 1.42 crore



Site	: Purnia , Bihar
Total site area	: 200 Sq.m
Total build up area	:
Ground floor area	: 110 Sq.m
First floor area	: 130 sq.m
F.A.R	: 1.2
Setback	:
Rear setback	: 750
mm/1050mm	
Front setback	: 2700mm
Back setback	: 1200mm
Client	: Wow infra
Project	: Duplex bun-
glow plan	
Project budget	: 70 lakh

Working Drawing for proposed Dr. Alok Nursery , Sitamarhi ,Bihar



02 : Internship Work : GNIDA - Greater Noida Industrial Development Authority

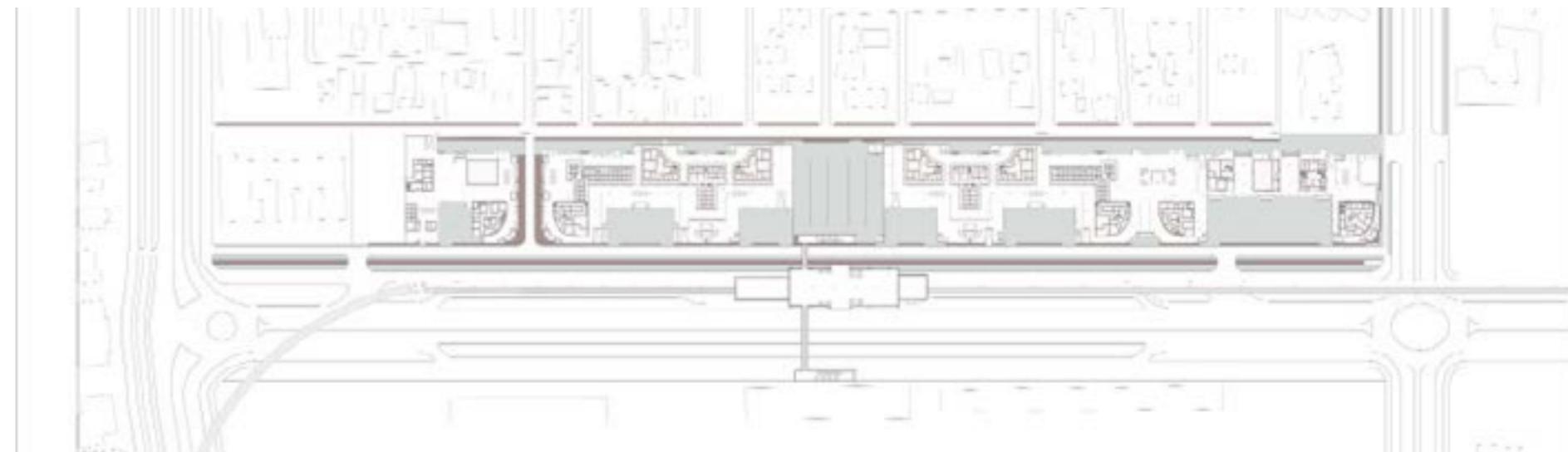
REJUVENATION OF ALPHA COMMERCIAL

EXISTING

Site : Alpha commercial belt , greater noida



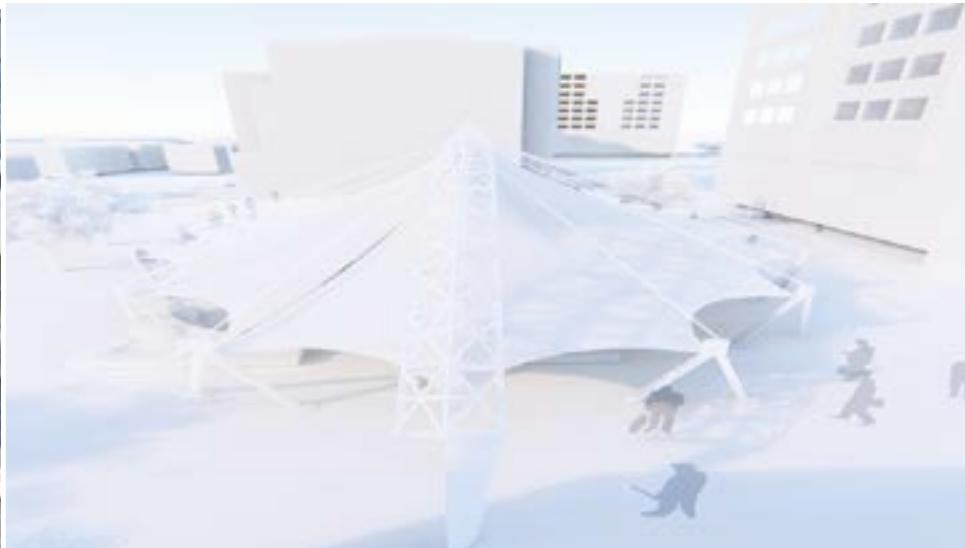
DEVELOPED OPEN AREA



Grey shaded part are open area for which area development happen



landscape



shaded structure at the back side of tower



food truck



shaded structure at the back side of tower

03.1 : CONCREATE WORKSHOP

Location : Sharda University , Greater Noida
Project : Concrete Workshop - Furniture
Year : 2018
Instructor : T.P Singh, Ceo of construction Research Technology

The workshop was aimed at understanding the concrete as a material for furniture and construction system and exploring the upcoming construction techniques related to concrete and its flexibility.

Concrete mixture (cement : sand : aggregate) ratio 1:1.5:2 for seating and adding chemical , Plasticizer for more strength in place of adding more water .



Fig. 3.Frame and pattern arrangement



Fig. 4.Bench top

Step for making furniture:

1. Wooden formwork
2. Oiling of frame
3. Fixing Rcc bar with frame work
4. Eva sheets and Thermocol cut into required pattern to get desired impression on slab.
5. Concrete mixture prepared with adding plasticizer chemical for increase workability and strength of concrete.
6. Testing of concrete workability and strength.
7. Pouring of concrete mixture into framework.
8. leaving it for 24 hours concrete to set .
9. Removing the frame and eva , thermocol sheets.
10. Joining leg .

Learning :

1. Concrete can be cast in any shape with proper formwork of any material like wood, aluminium etc.
2. Rcc should not oiled because it doesnot set with concrete .
3. Continous vibration should be there while pouring the mixture for proper setting of concrete.



Fig. 5. Frame and pattern arrangement



Fig. 1. Adding plasticizer in concrete



Fig. 2 . Testing strength of concrete

Limitation :

1. Impression should be sticked properly to avoid displacement of design.
2. bleeding should be soaked by jute or cotton material.
3. formwork should be reusable to save time , material.



Top view After painting



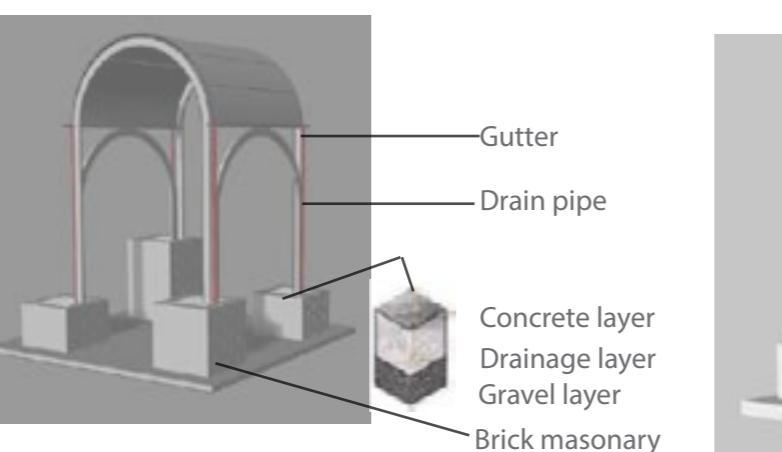
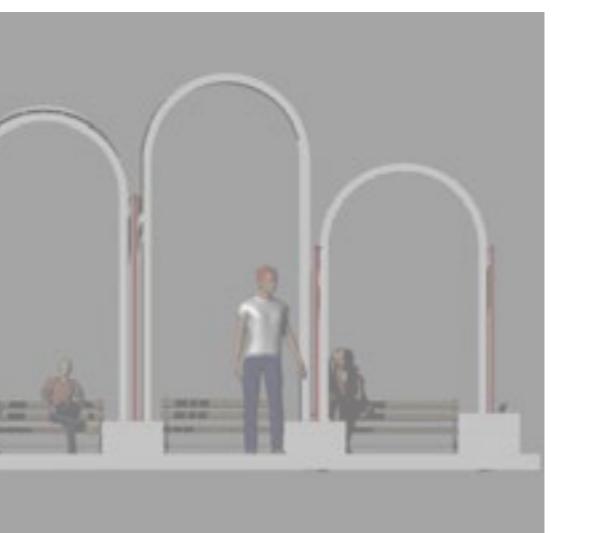
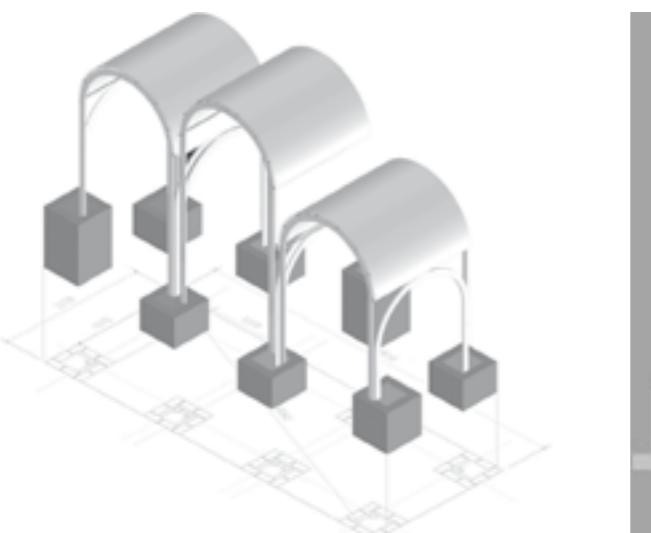
Fig. 6. Front view of concrete bench



03.2 : LAMINATED TIMBER PAVILLION

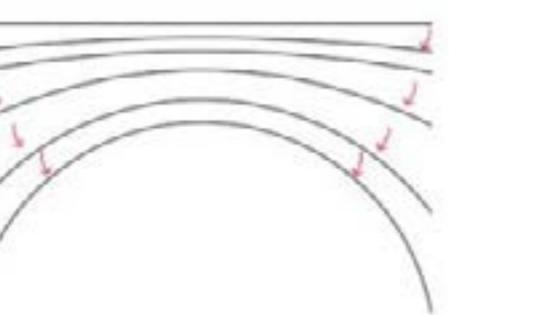
Location : Sharda University , Greater Noida
Project : Pavillion
Year : 2019
Instructor: Jason griffiths

The workshop was aimed at understanding the timber and its construction and exploring the upcoming construction techniques related to timber. Bending strips cross laminated pavillion is the structure designed and built with the half of waste long wooden logs, which is used for creating an arches . The set of 10-15 strips gluing them together and bending manually . And arches was formed with the help of glue and clamps were used for binding the offcuts together.



Detail of one bay

Four wooden strips are glued together to make purlin which can carry load of PVC sheets and bind arches for more stability.



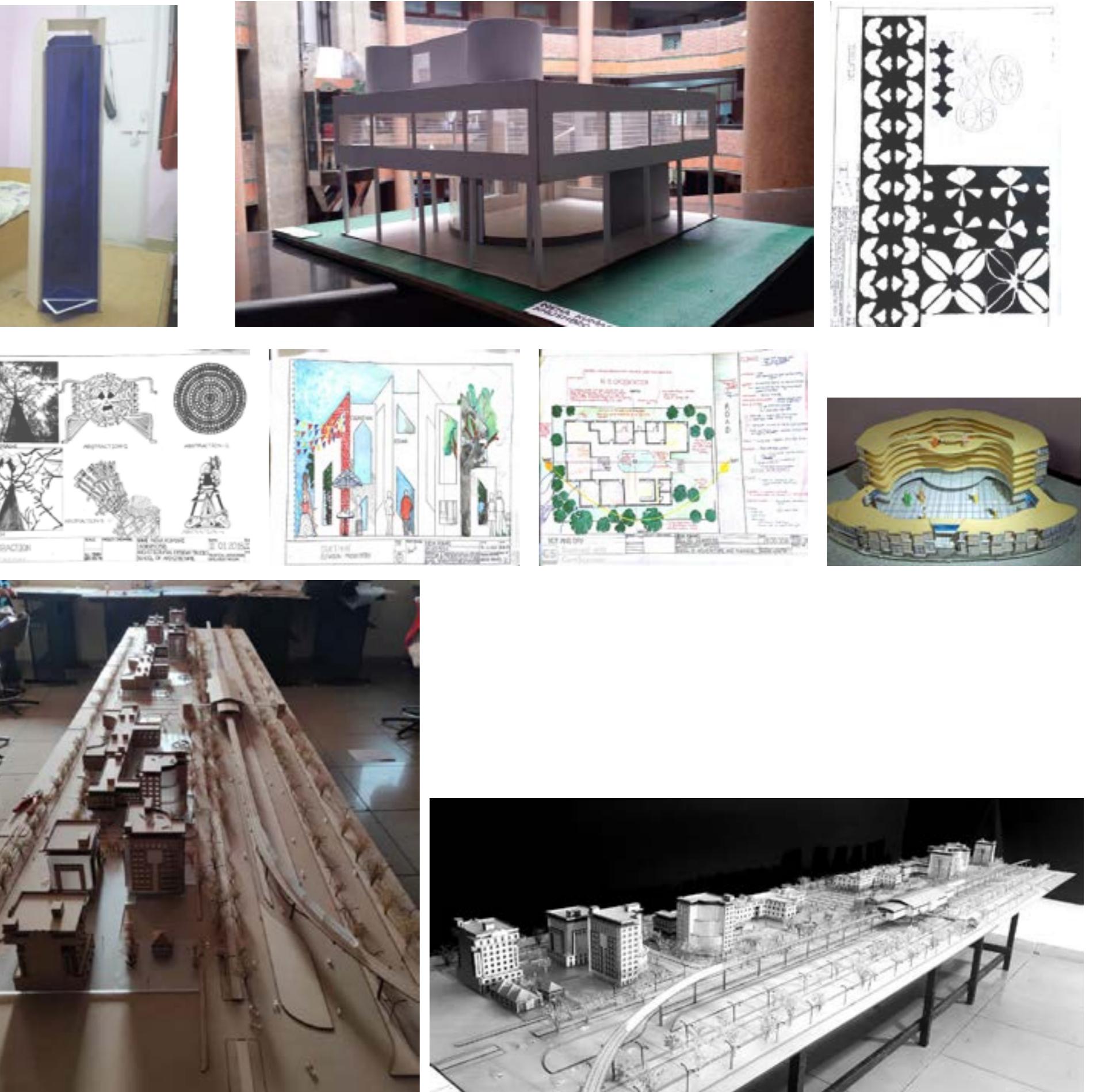
Making of strips

The strips were staggered to avoid the failure at the joints and to increase the durability of structures.

Then arches were combined to form a barrel vault which is covered with (PVC sheets) polycarbonate sheets , intension to provide shade in summer and winter.



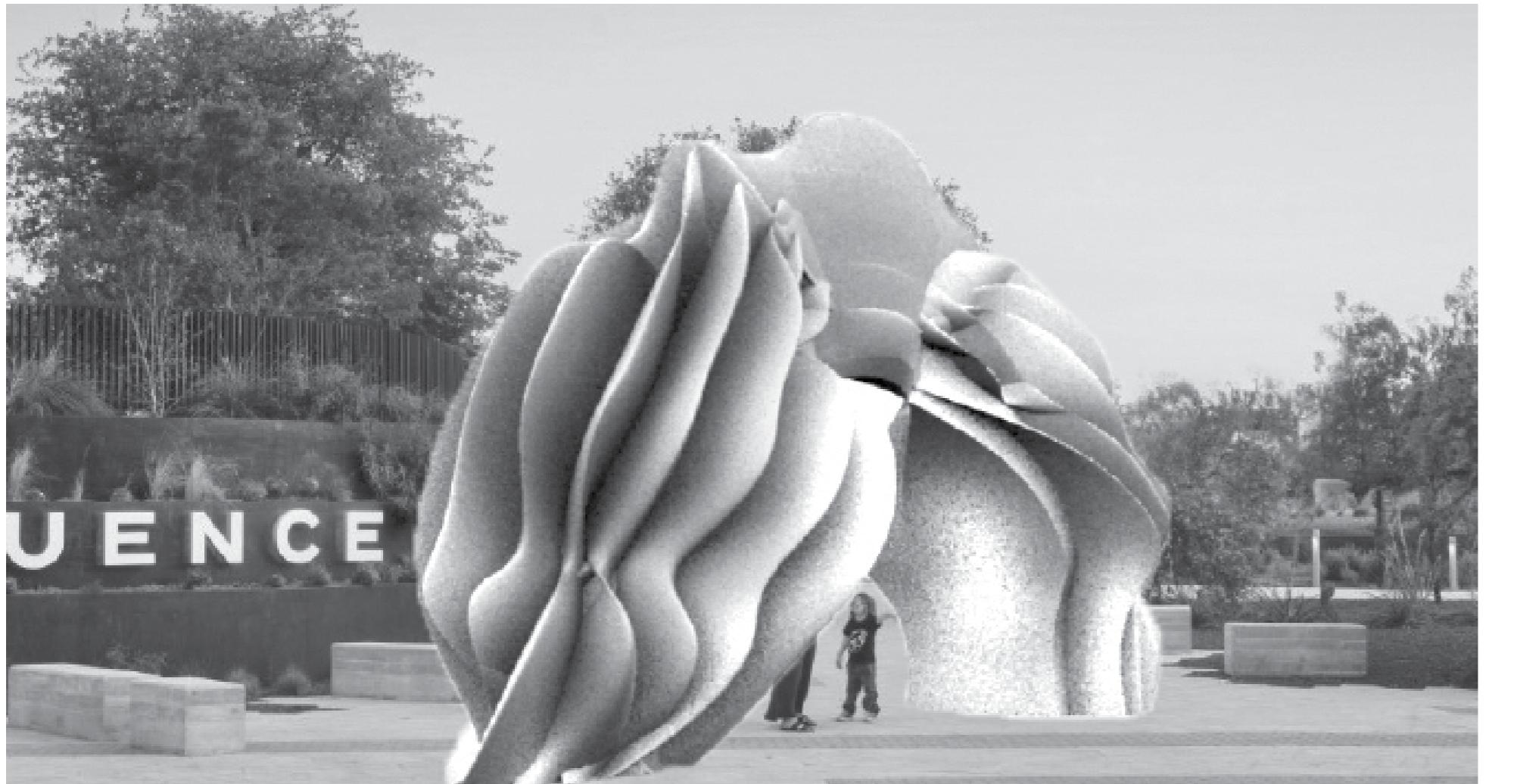
03.2 : Design development through model



03.2 : CONCREATE PETAL PAVILION

Pavillion offer a shaded passage , in a park providing a social anchor at the convergence of countless flow . This concrete petal pavilion is a highly curated scheme of computationally fitnessed protocol informing a graphically rich structural skin . The rise and fall of the form influenced by various traffic in human emotion which is stressed , anxious exhausted, overwhelmed , exited , confused , fear , frustration , nervous.

And for enjoyment for every group of people , student while studing , discussing with coffee, older on debating on something .



03.2 : WORKSHOP ORGANISED - SHARDA UNIVERSITY

Got the Opportunity to conduct Parametric workshop for First , second , third year student of architecture of Sharda university . In this 2 day workshop student were devided into 10 groups and each group have same amount of student from different year for understanding better the form , Parametric and Doubly curve surface which we are going to obtain from two material : First - Mdf , Lycra

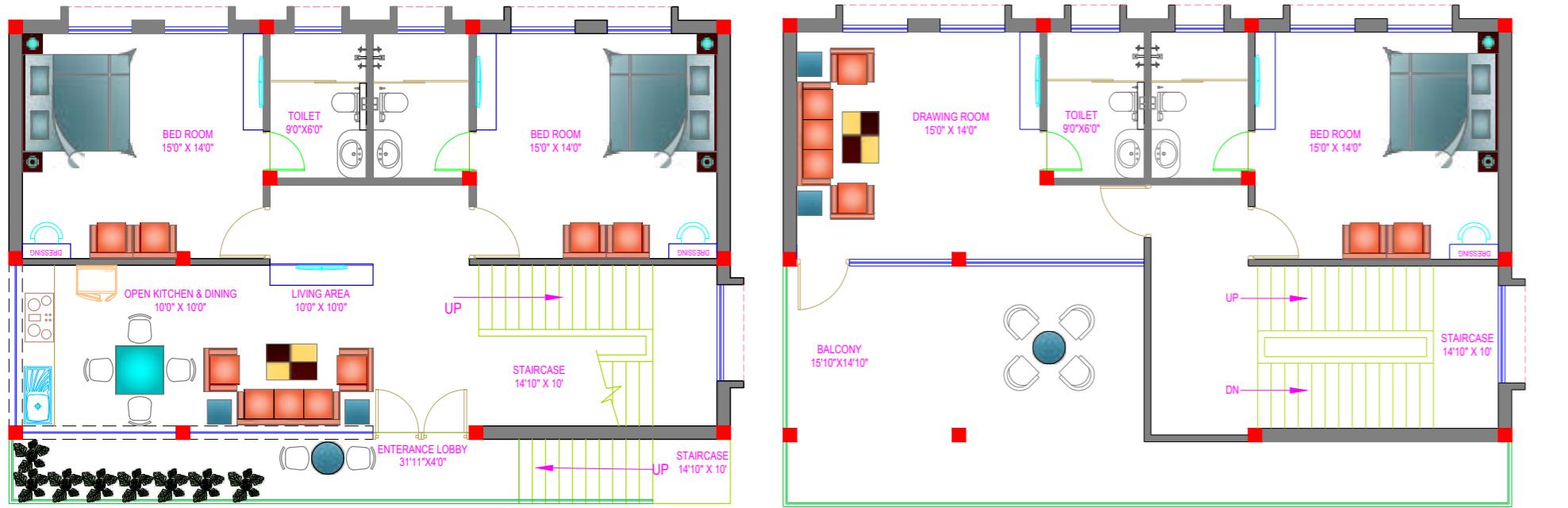
Here we have aware the student about different material , materials scope and limitation and about material flexibility . Each and every detail with the all Parameters to obtain different form in parametric design with its limitation of material. we have showed 1000 experiment done by us to Obtain different form and with Considerable parametres . After that student come up with different ideas and we fixed the design and the parameters because without Fixing parametres material can be at high tension and can break it from middle. For Mdf , as we increase length (x) of the strips then x is directly proportional to height of the form . we Introduced laser cut for mdf and lycra and mdf introducing with moisture and by drying we can obtain our desired shape and form.

Here , Product obtained During Workshop

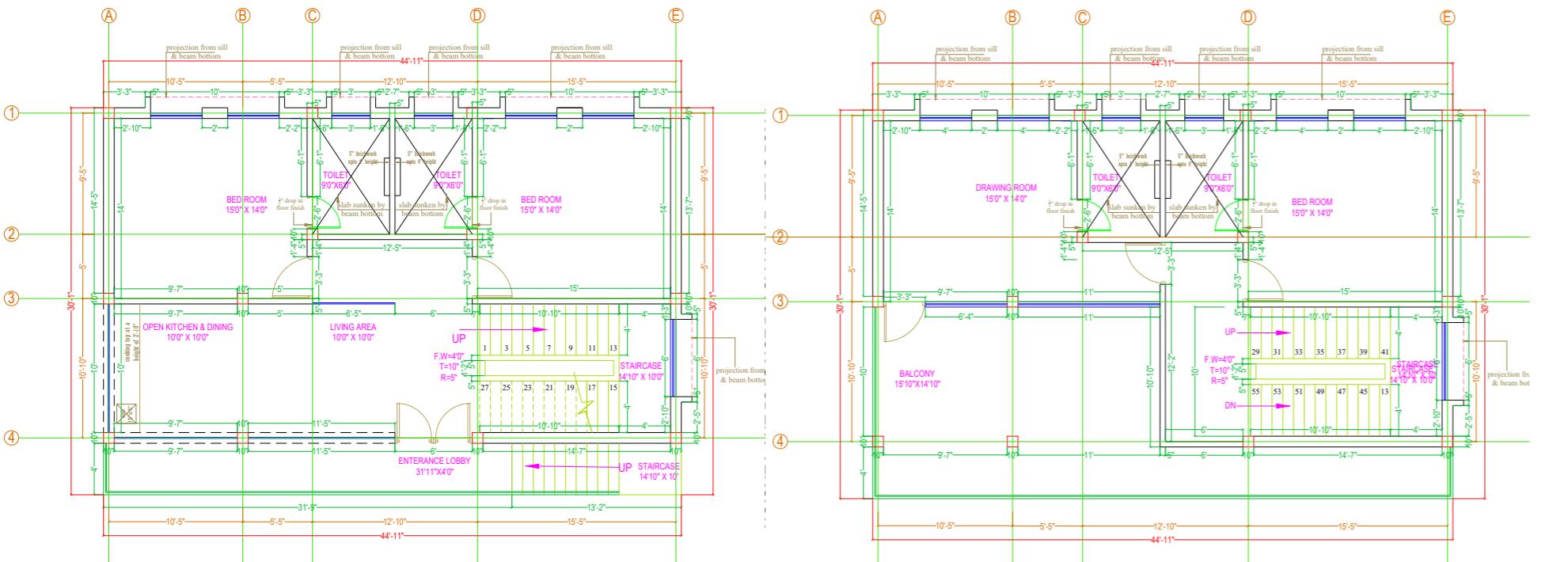


03.2 : WORKSHOP ORGANISED - SHARDA UNIVERSITY

Duplex Bunglor For Chanki Garh



GROUND FLOOR PLAN
AREA= 1350.00 Sq.Ft.



GROUND FLOOR PLAN
AREA= 1350.00 Sq.Ft.

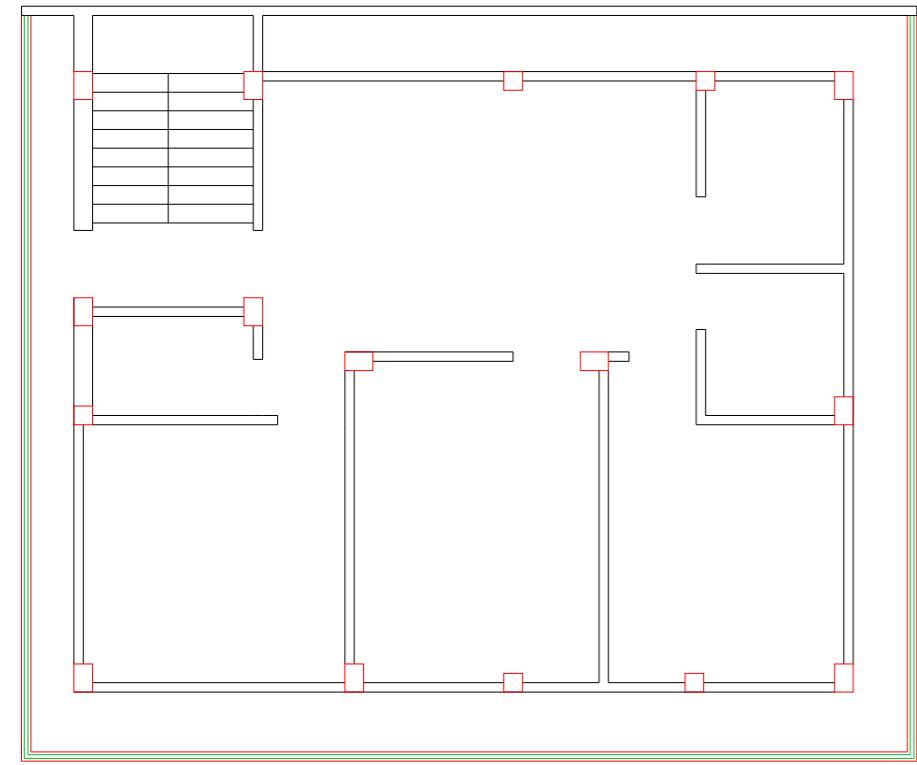


FIRST FLOOR PLAN
AREA= 1350.00 Sq.Ft.

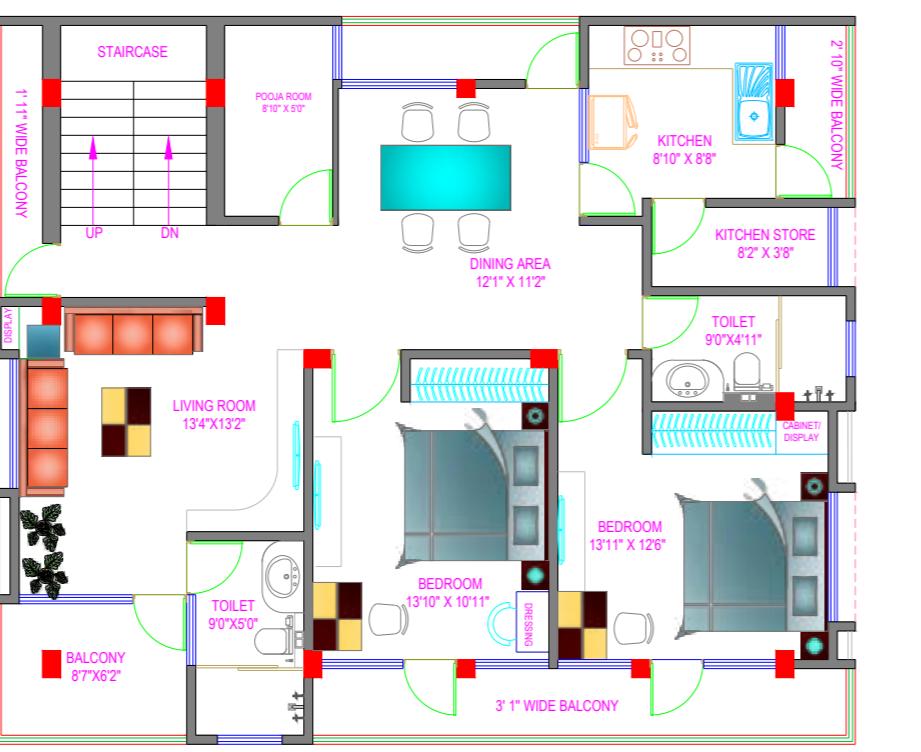


03.2 : WORKSHOP ORGANISED - SHARDA UNIVERSITY

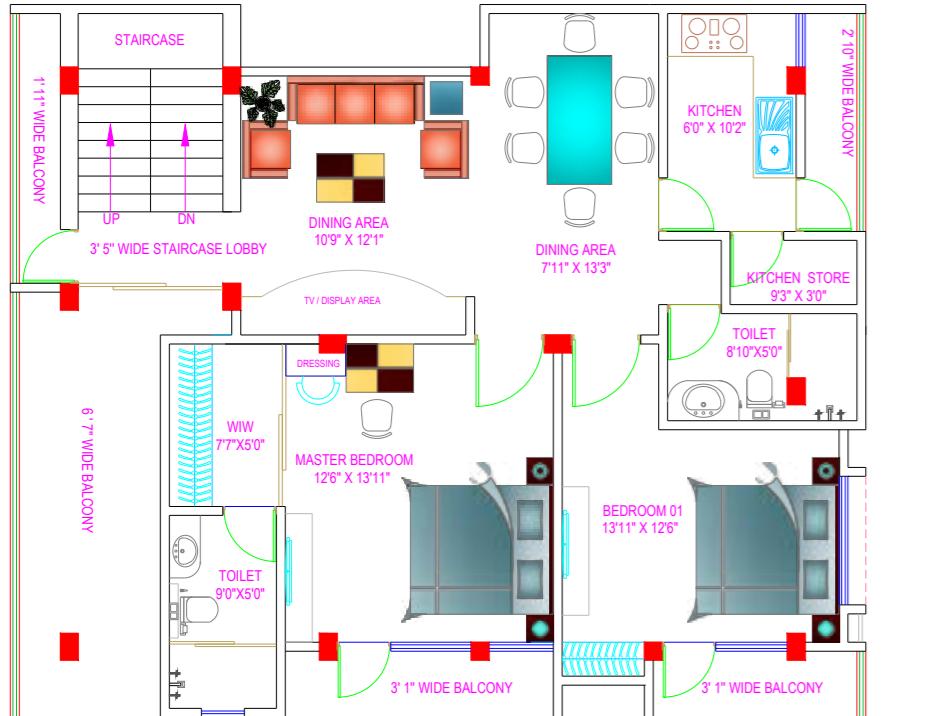
Floor Extension Project In Jaganpura , Patna



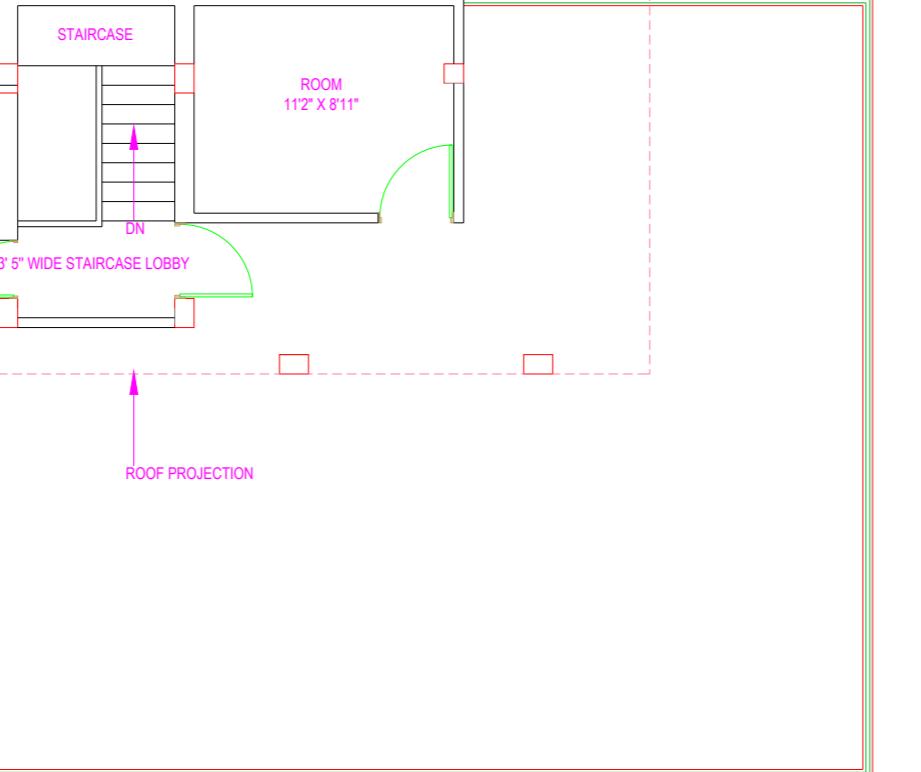
FIRST FLOOR PLAN



SECOND FLOOR PLAN



**THIRD FLOOR PLAN
OPTION 03**

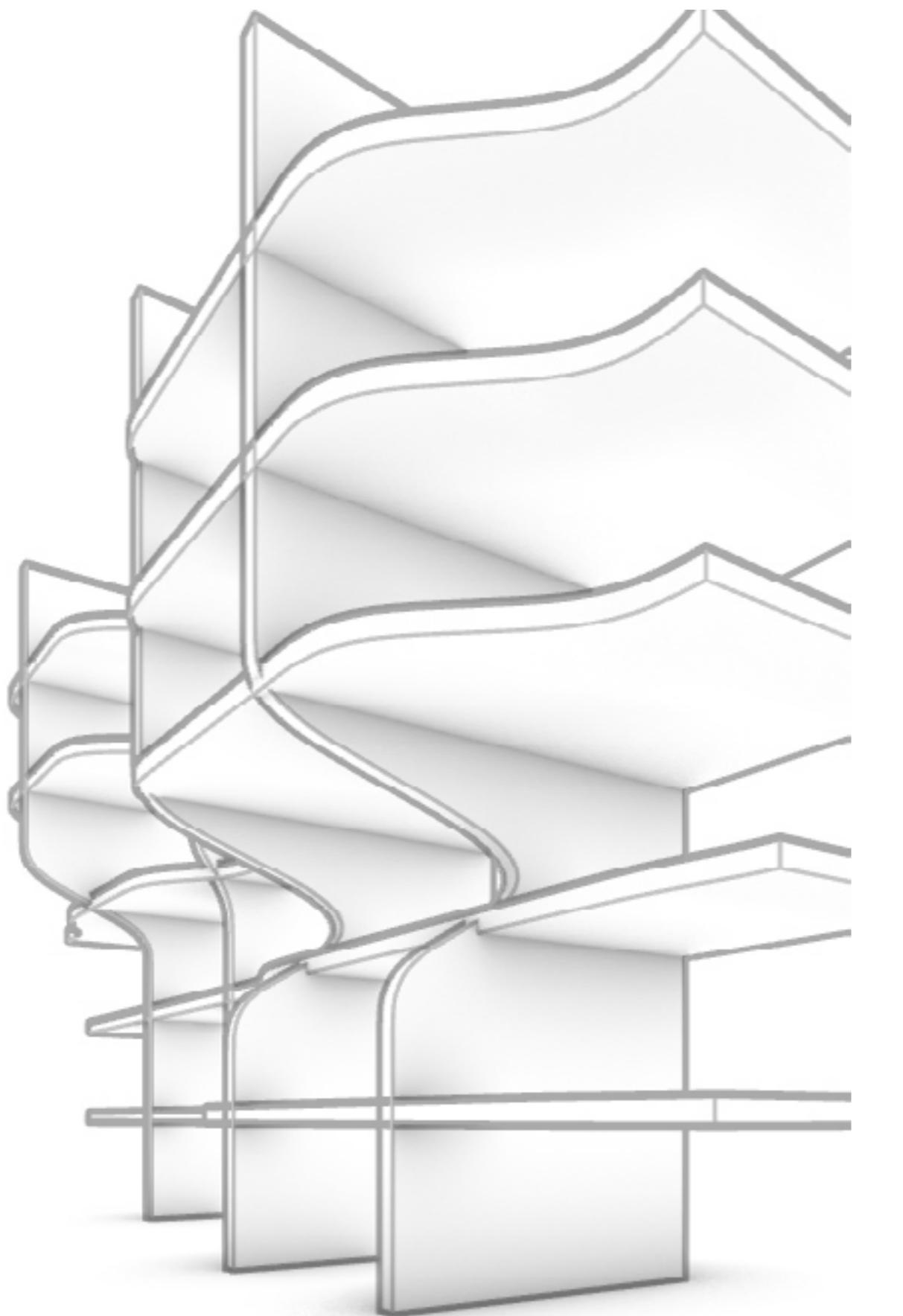
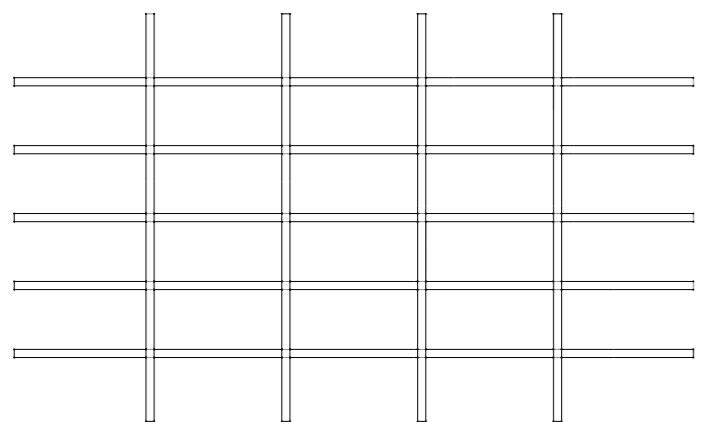
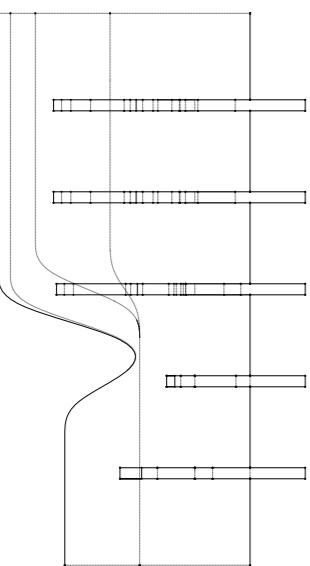
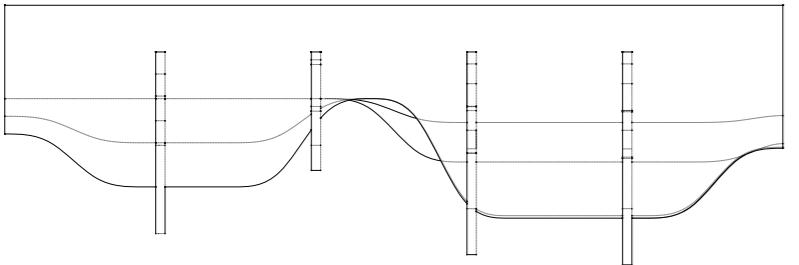
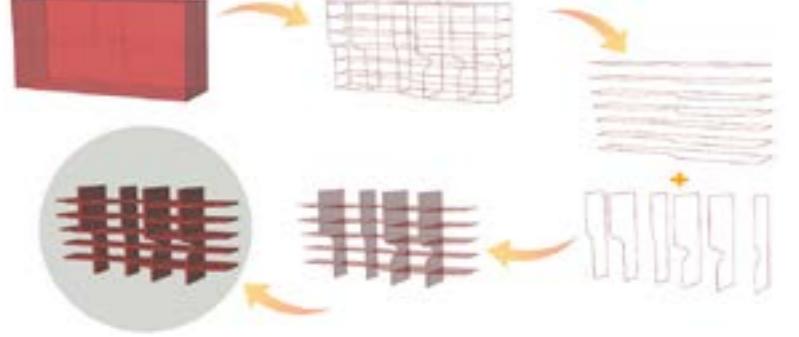


ROOF FLOOR PLAN

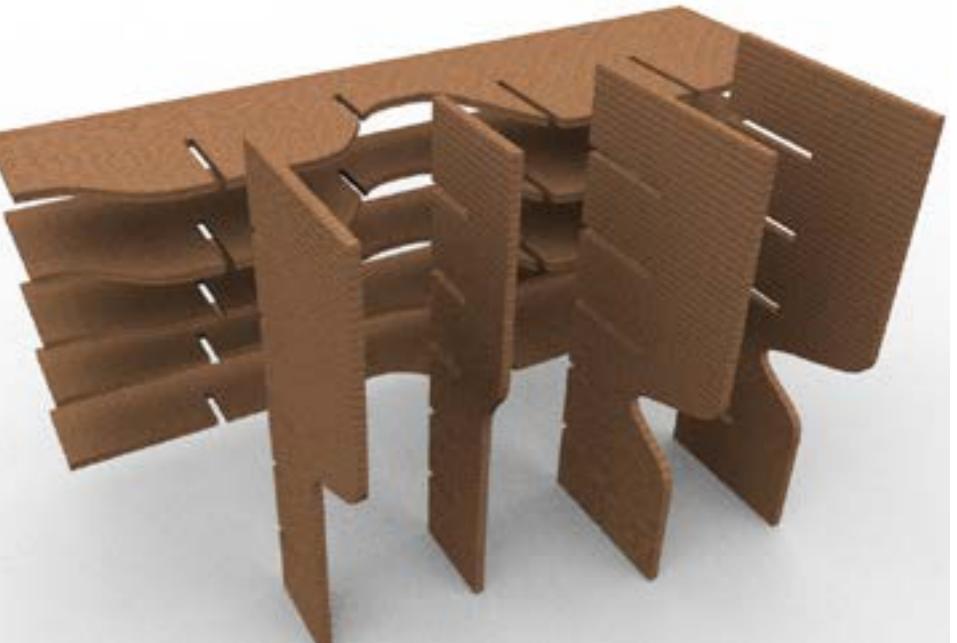
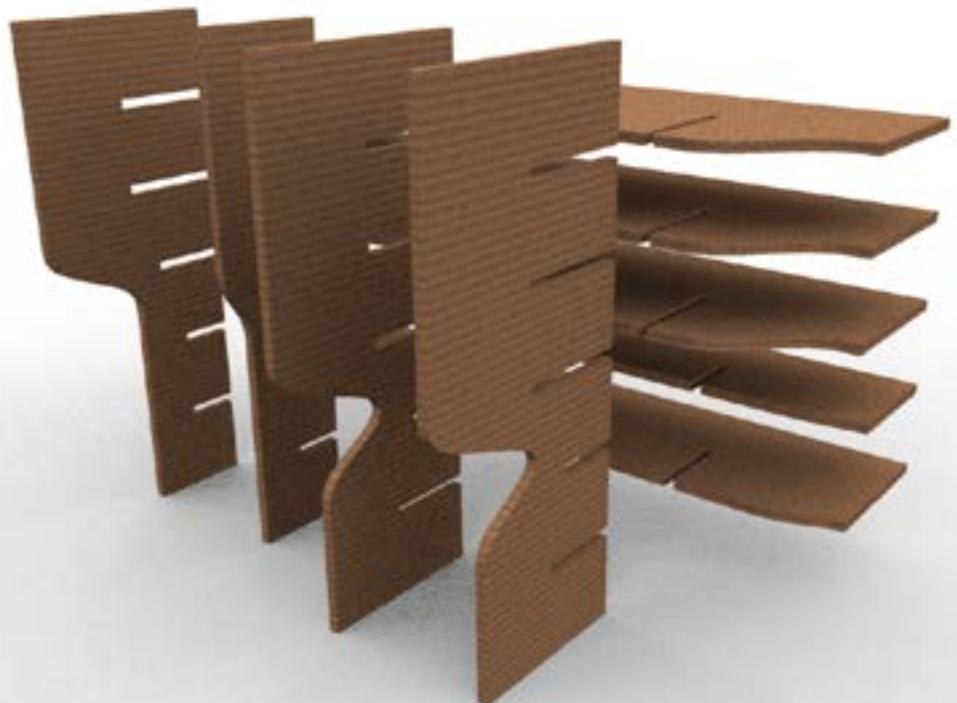


Shelf Designed

Shelf Designed For Patent , and Design Detail



Images of Shelf





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